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PART III

FEDERAL ENERGY ADMINISTRATION

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ENERGY SUPPLY AND ENVIRONMENTAL COORDINATION ACT

Prohibition Orders; Intention To Issue to Certain Installations

FEDERAL ENERGY ADMINISTRATION

ENERGY SUPPLY AND ENVIRONMENTAL COORDINATION ACT

Intention To Issue Prohibition Orders to Certain Installations; International Paper Co. and Fraser Paper, Ltd.

The Federal Energy Administration (FEA) hereby gives notice of its intention to issue Prohibition Orders, pursuant to the authorities granted it by Section 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974, as amended (ESECA), and Title 10, Code of Federal Regulations (10 CFR), Parts 303 and 305 to the following installations:

Docket No.	Owner	Installation	Unit No.	Location
OCU-0738	International Paper Co.	Jay plant	1, 2	Jay, Maine.
OCU-1888	Fraser Paper, Ltd.	Madawaska Mill	6, 7	Madawaska, Maine.

FEA hereby also gives notice of the opportunity for oral and written presentation of data, views, and arguments by interested persons regarding these proposed Prohibition Orders.

The proposed orders would prohibit the above-named installations from burning natural gas or petroleum products as their primary energy source.

Prior to issuance of a Prohibition Order to an installation, Section 2(a) of ESECA and 10 CFR 303.36(b) and 305.4(b) require that FEA find that the installation had the capability and necessary plant equipment to burn coal as of June 22, 1974. A Prohibition Order may not be issued unless FEA can find that the prohibition of the utilization of natural gas or petroleum products as a primary energy source is practicable and consistent with the purposes of ESECA and that coal and coal transportation facilities will be available during the period the Prohibition Order will be in effect. FEA's proposed findings, as well as its proposed conclusions and rationale with respect to these findings, for each installation are set out in the Appendix to this notice. These findings, conclusions and rationale may be amended as a result of comments received by FEA pursuant to this notice and other information available to FEA. The findings, conclusions and rationale will be included, with any amendments, for each Prohibition Order that is issued.

Upon completion of the proceedings described in this notice, FEA may determine to issue Prohibition Orders to some or all of the above-named installations. These Prohibition Orders will not become effective, however, until (1) either (a) the Administrator of the Environmental Protection Agency (EPA) notifies the FEA, in accordance with Section 119(d)(1)(B) of the Clean Air Act, that the installation is able to burn coal and to comply with all applicable air pollution control requirements without a compliance date extension under Section 119(c) of such Act, or (b) if such notification is not given by EPA, the date that the Administrator of EPA certifies, pursuant to Section 119(d)(1)(B) of the Clean Air Act, is the earliest date that the installation will be able to comply with all applicable requirements of Section 119 of that Act; and (2) FEA has considered the environmental impact of making the order effective, pursuant to 10 CFR 208.3(a)(4) and 305.9, and has served the affected installation with a Notice of Effectiveness, as provided in 10 CFR 303.10(b), 303.37(b) and 305.7. The date the Prohibition Order will be effective will be stated in the Notice of Effectiveness.

10 CFR 305.9 requires that, prior to issuance of a Notice of Effectiveness to an installation, FEA shall perform an analysis of the environmental impact of the issuance of such Notice of Effectiveness. That analysis shall result in either (1) issuance of a declaration that the Prohibition Order will not, if made effective by issuance of a Notice of Effectiveness, be likely to have a significant impact on the quality of the human environment, or (2) the preparation by FEA of an environmental impact statement covering significant site-specific impacts that are likely to result from the Prohibition Order and that have not been adequately addressed in the Final Programmatic Environmental Impact Statement or in other official documents made publicly available. If FEA prepares an environmental impact statement covering significant site-specific impacts resulting from making a Prohibition Order effective, the statement shall be prepared and published for comment in accordance with Section 102(2)(7) of the National Environmental Policy Act of 1969 prior to issuance of a Notice of Effectiveness. Interested persons may request a public hearing pursuant to 10 CFR 303.173 to comment on the contents of a draft environmental impact statement. With respect to comments regarding any impact on air quality that might result from a proposed Prohibition Order, however, it should be recognized that ESECA has assigned to EPA the primary responsibility for analyzing the effect of any such order on the Nation's air quality and for determining the applicable air pollution control requirements that apply to the installation that has been issued an order. It is expected that, in almost every case, an installation to which a Prohibition Order is issued will be eligible to apply to EPA for a compliance data extension. In connection with that application, EPA must also provide an opportunity for written comment and oral presentation of data, views, and arguments by interested persons. Enclosed with the Notice of Effectiveness may be a compliance reporting schedule to insure that the installation will be able to comply with the prohibition of the burning of natural gas or petroleum products as a primary energy source on the effective date specified in the Notice of Effectiveness.

Public comment on the proposals to issue Prohibition Orders to the installations listed above is invited in the form of written and oral presentation of data, views, and arguments. Comments should relate to individual docket numbers and should make clear to which docket number the individual comment is addressed.

Comments should address (1) the adequacy and validity of each of the proposed findings and the conclusions and rationale in support of these findings, (2) the environmental impact of making effective a Prohibition Order, including any site-specific environmental impacts, and (3) any other aspects or impacts of the proposed Prohibition Order believed to be relevant.

Pursuant to 10 CFR 303.173(a) and (d) and 305.5, FEA hereby announces that a public hearing to receive oral presentation of data, views, and arguments of interested persons will be held beginning at 9:00 a.m. on May 24, 1977, at the J. W. McCormack Post Office and Courthouse Building, Room 208, Park Square, Boston, Massachusetts 02109. Any person who has an interest in the subject of the hearing or who is a representative of a group or class of persons which has an interest in the subject of the hearing may make a written request, or a verbal request if confirmed in writing, for an opportunity to make an oral presentation. That request should be directed to Richard Meister, FEA Region I, 150 Causeway Street, Boston, Massachusetts 02114, (617) 223-3701. The request should be received before 4:30 p.m., Thursday, May 19, 1977. The request should describe the person's interest in the issue(s) involved; if appropriate, it should state why the person is an appropriate representative of the group or class of persons which has such an interest; it should give a concise summary of the proposed oral presentation and a phone number where the person may be contacted through May 23, 1977. Speakers should submit ten (10) copies of their oral presentation if possible, unless such presentation is less than five (5) pages, in which case only one copy is required, to Robert Mitchell, Regional Administrator, Federal Energy Administration, 150 Causeway Street, Room 700, Boston, Massachusetts 02114, before 4:30 p.m., Monday, May 23, 1977. Speakers will be contacted by an FEA representative before 4:30 p.m., Friday, May 20, 1977, to confirm receipt of the written request.

Detailed technical data, views, and arguments should be contained in a written submission in support of the oral presentation. The oral presentation itself should be a summary of those written comments.

While FEA will endeavor to provide adequate opportunity to all who desire to speak, FEA reserves the right to limit the number of persons to be heard at the hearing, to schedule their respective presentations and to establish the procedures governing the conduct of the

hearing. The length of time allocated to each presentation may be limited on the basis of the number of persons requesting to be heard. The FEA will prepare an agenda that shall provide, to the extent possible, for the presentation of all relevant data, views, and arguments.

An FEA official will be designated to preside at the hearing which will not be a judicial or evidentiary hearing. During oral presentations only those conducting the hearing may ask questions. There will be no cross-examination. At the conclusion of all initial oral presentations, each person who has made an oral statement will be given the opportunity, if he or she so desires, to make a rebuttal statement. The rebuttal statements will be given in the order in which the initial statements were made and will be subject to time limitations.

Any interested person may submit written questions to the presiding officer to be asked of any person making an oral presentation. The presiding officer will determine whether to ask the question, having first determined whether the question is relevant, and whether adequate time may be afforded for an answer.

Any further procedural rules needed for the proper conduct of the hearing will be announced by the presiding officer.

A transcript of the hearing will be made and it, together with any written comments submitted in the course of the hearing, will be retained by the FEA and made available for inspection and copying at the Freedom of Information Reading Room, Room 2107, Federal Building 12th and Pennsylvania Avenue, NW., Washington, D.C. 20461, and the FEA Regional Office, Library, 7th Floor, 150 Causeway Street, Boston, Massachusetts 02114, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. Anyone may purchase a copy of the transcript from the reporter.

Interested persons are invited to submit written comments consisting of data, views, and arguments with respect to these proposed Prohibition Orders to Executive Communications, Box MK, Federal Energy Administration, Federal Building, Room 3317, 12th and Pennsylvania Avenue, NW., Washington, D.C. 20461.

Comments and other documents submitted to FEA Executive Communications should be identified on the outside of the envelope in which they are transmitted and on the document itself with the designation "Proposed Prohibition Order for the _____ Installation." Fifteen copies should be submitted.

All written comments received by 4:30 p.m., Tuesday, June 14, 1977, all oral presentations, and all other relevant information submitted to or available to FEA will be considered by FEA prior to issuance of a Prohibition Order.

Any information or data considered to be confidential by the person furnishing it must be so identified and submitted in writing, one copy only. The FEA reserves the right to determine the confidential status of the information or data and to treat it in accordance with that determination.

Copies of the regulations implementing Section 2 (a) and (b) of ESECA (10 CFR Parts 303 and 305) are available from the following FEA Regional Offices:

REGION, ADDRESS, AND PHONE

I. Robert Mitchell, Regional Administrator, 150 Causeway Street, Room 700, Boston, Massachusetts 02113—617–223–3701.

II. Alfred Kleinfeld, Regional Administrator, 26 Federal Plaza, Room 3206, New York, New York 10007—212–264–1021.

III. J. A. LaSala, Regional Administrator, 1421 Cherry Street, Room 1001, Philadelphia, Pennsylvania 19102—215–597–3390.

IV. Donald Allen, Regional Administrator, 1655 Peachtree Street, N.E., 8th Floor, Atlanta, Georgia 30309—404–526–2837.

V. N. Allen Anderson, Regional Administrator, Federal Office Building, 175 West Jackson Blvd., Room A–333, Chicago, Illinois 60604—312–353–0540.

VI. Delbert Fowler, Regional Administrator, Post Office Box 35228, 2626 West Mockingbird Lane, Dallas, Texas 75235—214–749–7345.

VII. Nell Adams, Regional Administrator, 1150 Grand Avenue, Kansas City, Missouri 64106—816–374–2061.

VIII. Dudley Faver, Regional Administrator, Post Office Box 26247, Belmar Branch, 1075 South Yukon Street, Lakewood, Colorado 80226—303–234–2420.

IX. William Arntz, Regional Administrator, 111 Pine Street, San Francisco, California 94111—415–556–7216.

X. Jack B. Robertson, Regional Administrator, 1992 Federal Building, 915 Second Avenue, Seattle, Washington 98174—206–442–7280.

MFBI PROHIBITION ORDER CANDIDATE IDENTIFICATION AND SELECTION METHODOLOGY

FEA has engaged in a two year, two part, process in which it first identified, after extensive information gathering, the potential universe of major fuel burning installations (MFBI's) in order to determine which MFBI's might be subject to Prohibition Orders. FEA then performed a detailed analysis of individual potential order recipients to determine whether facts would warrant publication of a Notice of Intention (NOI) to Issue a Prohibition Order to any of the potential order recipients.

I. DETERMINATION OF CANDIDATE UNIVERSE

On March 20, 1975, by Notice in the FEDERAL REGISTER (40 FR 12706), FEA required MFBI's with design firing rates in excess of 100 million BTU's per hour to provide basic identifying information. (FEA in its regulations published on May 9, 1975, (40 FR 20463) adopted the 100 million BTU's per hour design firing rate as the minimum size MFBI that would be eligible for a Prohibition Order).

On April 18, 1975, FEA published notice in the FEDERAL REGISTER (40 FR 17328) that it would mail to all then known MFBI's a questionnaire, entitled "Major Fuel Burning Installation Coal Conversion Report" (Form FEA C–602–S–0), designed to provide FEA with additional information needed to help determine whether the MFBI's would be candidates for Prohibition Orders. Questionnaires were mailed to those respondents to the March 20, 1975, FEDERAL REGISTER notice and to other MFBI's identified through data provided by FEA regional personnel, the Environmental Protection Agency, other Federal agencies, and through contact with trade associations. A total of 822 parent companies responded to the survey, identifying 3,482 installations and 6,289 individual units.

The first survey provided FEA with historical information on quantity and quality of fuel use and preliminary pollution control data relative to the facilities in question.

Compilation and evaluation of the information received from the survey led to development of a supplemental questionnaire (Form FEA C–602–S–1) to elicit data on the financial situation of owners of MFBI's, including information designed to ascertain what the effects of a Prohibtion Order would be on an individual company basis. This questionnaire was designed to provide a basis for subsequent analysis of the MFBI in terms of financial capability, additional capital investment costs resulting from a Prohibition Order, operating cost differentials and coal and coal transportation availability. This supplemental questionnaire was sent in June 1976 to various owners of MFBI's to obtain information on 161 sites and 281 individual units.

Most of the supplemental questionnaires (involving 138 sites and 246 units) were sent to owners of MFBI's identified as capable of burning coal in the first questionnaire and which, in 1974, burned at least 150,000 barrels of oil or 921,000,000 cubic feet of natural gas or a BTU equivalent combination. These MFBI's were chosen because of their potential for large fuel savings and the potential low conversion costs to fuel savings ratio.

The other supplemental qusetionnaires were sent to MFBI's which had indicated an intention to discontinue coal use (23 sites at which there were 35 units).

In September 1976, after responses to the supplemental questionnaires had been received, FEA consulted with the Environmental Protection Agency (EPA) to obtain EPA's best estimate as to the means by which these MFBI's could burn coal and comply with all applicable air pollution control requirements. EPA indicated whether particular MFBI's would require upgrading, or installation of electrostatic precipitators, installation of flue-gas desulfurization devices, or whether the MFBI could burn coal that would conform to air pollution control requirements without pollution control equipment.

II. SITE SPECIFIC ANALYSIS

Once FEA had gathered the supplemental data relating to the 161 sites, it then conducted a technical analysis for each respondent to the supplemental questionnaire.

FEA prepared a technical summary based on the information provided to

enable the Agency to analyze each respondent's potential amenability to receipt of an NOI. The technical summary consisted of the following data:

a. Expected remaining useful life (respondent's and FEA's estimates);
b. Unit capacity;
c. Fuel consumption for 1975;
d. The last year coal was burned at the installation;
e. Costs of converting to coal, including pollution control equipment, if any (respondent's and FEA's estimates);
f. Type of pollution control equipment, if any, required (respondent's and EPA's estimates); and
g. Other relevant factors, such as percent sulfur content in coal that would be required to insure compliance with environmental standards.

FEA eliminated or deferred from further consideration those MFBI's for which the following criteria were applicable:

a. Remaining useful life of the MFBI on January 1, 1978 would be less than one year (based on an expected useful life of 40 years);
b. The utilization factor of the MFBI was less than 20 percent;
c. Space required for coal use at the installation was inadequate or unavailable;
d. Since filing the original questionnaire, the MFBI had been converted to coal as its primary energy source or the owner has certified thhat the MFBI will be so converted in the near future;
e. The MFBI used (in the latest year for which fuel use figures are available) significantly less than 2×10^{12} BTU's of oil or natural gas.

Items a or b above, would prevent FEA from finding that burning coal by the MFBI would be practicable. FEA assumed a forty-year useful life as a reasonable estimate based on general industrial averages. FEA has decided not to analyze MFBI's that have already converted to coal, since the basic purposes of ESECA have already been accomplished by such conversions and FEA has concluded that its resources would be better allocated by concentrating on those MFBI's which are not now burning coal.

Certain MFBI's were eliminated from further analysis upon FEA's determination that one or more of the factors which FEA must consider pursuant to § 305.4(c) of its regulations would have resulted in disqualification of a particular MFBI. Such eliminations were based on factors such as process fuel uses peculiar to the MFBI's, inadequate land or space for coal related facilities, unique or unusual environmental constraints, and other similar disqualifying considerations.

If in FEA's judgment, analysis of the summary information raised issues that required further investigation, FEA conducted visits to the specific sites. Site visits were employed in circumstances in which large discrepancies between FEA's and the MFBI's cost estimates were observed, unusual technical problems were presented by the MFBI with respect to coal use, and when other disparities occurred between the information submitted by the MFBI and that developed independently by FEA. Information developed during the site visits served to either eliminate an MFBI from further consideration, through the aforementioned criteria, or served to demonstrate that FEA should continue its analysis.

For each FMBI not eliminated through any of the above criteria, FEA has calculated the net operating cost differential between using coal as the MFBI's primary energy source and using either natural gas or petroleum products.

A. *Calculation of net operating cost differential.* The net operating cost differential consists of the sum of (1) annualized increased capital investment costs required for conversion to coal, (2) differences in operating and maintenance costs (including the fuel cost differential), and (3) the potential tax consequences attendant to conversion. Initially, FEA performs two calculations in determining the net operating cost differential, one using cost figures supplied by the MFBI and the other using FEA's own estimates. When the MFBI's figures are within a reasonable range of FEA's estimates, FEA generally accepts the MFBI's figures. Gross discrepancies are examined in more detail by FEA to determine the reasonableness of the differing estimates and to reconcile differences.

The elements of the three parts of the net operating cost differential are explained below:

1. *Capital investment costs.* The primary element in this part is the cost of equipment acquisition and refurbishment required for conversion to coal, including refurbishment or acquisition of pollution control equipment. In determining the estimated annual increase fixed costs to the owner resulting from such capital investment, FEA calculates the annual depreciation of equipment costs over the expected remaining useful service life of the MFBI (including consideration of the investment tax credit) and adds the estimated annual cost of capital.

Annual depreciation is calculated as follows:

a. Determine cost of new equipment (including pollution control equipment) minus investment tax credit of 10 percent.
b. Divide the figure in a, above, by the expected remaining useful life of the MFBI after conversion is completed. FEA presumes that the MFBI's determination of remaining useful life is correct if it results in a total useful life of at least 40 years. Otherwise, FEA will conduct a more detailed examination of the MFBI.

Calculation of the approximate annual cost of capital is as follows:

a. New and refurbished equipment costs minus the investment tax credit, plus.
b. Twice the cost of land acquisitions required for conversions to coal burning.
c. The total of 1) and 2) is divided by 2 and then multiplied by a 10-percent interest rate.

2. *Operating and maintenance costs.* The primary factor considered in this calculation is the annual fuel cost differential which represents the difference between operating the MFBI with coal as its primary energy source in lieu of petroleum products or natural gas. (If the current supply of natural gas to the MFBI is curtailed, then the calculation of the fuel cost differential does not include natural gas as part of the MFBI's current fuel use to the extent of that curtailment. In such cases the NOCD was calculated on the basis of actual fuel usage). FEA has generally accepted the coal price reported by the MFB's. If FEA considered the stated price to be unreasonable, it further examined coal prices based upon an analysis of delivered prices of coal in the area of the MFBI under consideration and an analysis of likely coal sources. Projected coal use after conversion was calculated by converting latest annual fuel use data to its BTU equivalent for coal.

Determination of the differential relating to labor costs and the differential relating to other operating and maintenance costs was based upon estimates supplied by the MFBI's.

3. *Potential tax effects.* Federal and state tax rates have been applied to the net operating cost differential to determine maximum potential tax effects resulting from a Prohibition Order.

If the NOCD for an MFBI was positive, that is, projects an increase in annual costs of operations, then a calculation of the cost per barrel of oil saved was performed by dividing the NOCD by the number of barrels of oil actually used on an annual basis (or, if the MFBI was a natural gas user, the number of barrels of oil which would be required to replace the gas use on an equivalent BTU basis). This figure (cost per barrel of oil saved) was then considered in terms of the number of barrels of oil and/or MCF of natural gas that would be saved by issuance of a Prohibition Order, the effect of the NOCD on the MFBI owner's operating expenses, as well as various environmental and other factors in reaching the final determination as to which candidates should receive an NOI.

It is to be noted that much of the information used by FEA to make its practicability findings is arguably confidential under 18 U.S.C. 1905. Therefore, such information has not appeared in the Appendix to the NOI. The calculations have been explained in each case and the data are available to the representatives of the owner of the MFBI.

Any questions regarding this Notice should be directed to the FEA National Office as follows: Federal Energy Administration, Code OCU (Prohibition Order: ---------- Installation), Washington, D.C. 20461, (202) 566-7941.

(Energy Supply and Environmental Coordination Act of 1974 (15 U.S.C. 791 et seq.), as amended by Pub. L. 94-163; Federal Energy seq.), as amended by Pub. L. 94-385; E.O. seq.), as amended by Pub. L. 94-385; E.O. 11790 (39 FR 23185).)

Issued in Washington, D.C., May 9, 1977.

ERIC J. FYGI,
Acting General Counsel,
Federal Energy Administration.

APPENDIX A—PROPOSED FINDINGS AND RATIONALE FOR NOTICE OF INTENTION TO ISSUE A PROHIBITION ORDER

ESECA and the FEA regulations require FEA to make certain findings before issuing a Prohibition Order to a major fuel burning installation (MFBI). FEA's proposed findings are set out below with respect to the MFBI's named below. Supporting rationale and conclusions are also set forth.

Docket No.	Owner	Installation	Unit No.	Location
COU-0738	International Paper Co.	Jay plant	1, 2	Jay, Maine.

These findings, which are now proposed by FEA, are based on the information that has been provided to and developed by FEA prior to the issuance of this Notice of Intention (NOI) to issue a Prohibition Order.

International Paper Company shall be referred to as the "owner" and as "International". Jay Plant Units 1 and 2 shall be referred to as the "MFBI's" and as "Jay 1 and 2".

I. CAPABILITY AND NECESSARY PLANT EQUIPMENT TO BURN COAL

FEA proposes to find that on June 22, 1974, Jay 1 and 2 had the capability and necessary plant equipment to burn coal. This proposed finding is based on the facts and interpretations stated below:

A. International, in a Major Fuel Burning Installation Coal Conversion Report, Section II, Questions 6, and 12–14, (Form FEA C–602–S–0), filed on May 16, 1975, indicated that each MFBI had in place on June 22, 1974, a boiler that was capable of burning coal. The boilers had been designed and constructed or modified to burn coal as their primary energy source, notwithstanding the fact that on June 22, 1974, the MFBI's may not have been burning coal as their primary energy source.

B. Based on information International filed with FEA dated August 11, 1976, and other information available to FEA, the following plant equipment and facilities at Jay 1 and 2 would have to be acquired or refurbished in order for these MFBI's to burn coal as their primary energy source:

1. Unloaders.
2. Conveyors.
3. Crushers.
4. Pulverizers.
5. Feeders.
6. Scales.
7. Air heaters.
8. Combustors.
9. Soot blowers.
10. Special instrumentation and controls.
11. Ash handling and ponding equipment.

C. FEA proposes to find that on June 22, 1974, Jay 1 and 2 had all other significant plant equipment and facilities associated with the burning of coal.

D. Within the meaning of ESECA and the regulations promulgated pursuant thereto, the equipment and facilities listed in paragraph B, above, do not individually or in combination constitute a lack of capability and necessary plant equipment to burn coal, as of June 22, 1974.

II. THE BURNING OF COAL IN LIEU OF NATURAL GAS OR PETROLEUM PRODUCTS IS PRACTICABLE AND CONSISTENT WITH THE PURPOSES OF ESECA

FEA proposes to find that the burning of coal in lieu of petroleum products or natural gas at Jay 1 and 2 is practicable and consistent with the purposes of ESECA. This proposed finding is based upon an analysis by FEA of the fuel consumption of these boilers for the period 1973–1975, the remaining useful service life of each boiler after conversion, the net operating cost differential that would result from compliance with a Prohibition Order, as well as the facts and interpretations referenced below:

A. *The burning of coal is practicable.* 1. *Costs associated with burning coal.* a. *Capital investment costs.* The total estimated initial capital investment costs, including financing costs, that would result from the acquisition and refurbishment of equipment and facilities associated with the burning of coal at Jay 1 and 2 have been determined.

This determination was based on existing FEA information and analysis as well as information filed with FEA by the owner. Approximate costs to comply with applicable environmental protection requirements have also been considered, including the cost of compliance with the air pollution control requirements of the Clean Air Act.

b. *Annual operating and maintenance costs.* The expected increase in operating and maintenance costs, exclusive of fuel costs, that would result from the burning of coal has been calculated based on information supplied by the owner or otherwise acquired by FEA.

c. *Fuel costs.* Based on an analysis of annual fuel consumption and fuel cost information supplied by the owner and/or, in appropriate circumstances, upon FEA's fuel cost estimates, FEA has determined that the burning of coal in lieu of natural gas or petroleum products at Jay 1 and 2 will result in a decrease in annual fuel costs.

d. *Net operating cost differential.* Based on the factors stated in paragraphs A.1.a–c., above, as well as the expected remaining useful life of the boilers after conversion, FEA has determined that the net annual operating cost differential (which represents the difference between operating the boilers with coal and alternate fuel(s) as their primary energy source), resulting from the conversion of Jay 1 and 2 will represent an annual cost increase of $712,138.

2. *Reasonableness of costs of conversion.* The foregoing analysis of the costs of conversion provided the basis for deciding whether the conversion of Jay 1 and 2 is reasonable.

As a result of conversion, International will incur additional capital investment costs, including financing costs, and additional annual operating and maintenance costs, exclusive of fuel costs, but will experience an annual savings in its total fuel costs for the expected remaining useful service life of the boilers after conversion.

Increased costs of conversion will be mitigated by the decrease in fuel costs. The net result, however, will be an increase in the annual cost of operating the boilers.

The use of coal at Jay 1 and 2 will result in a substantial annual savings of barrels of oil that otherwise would be used as a boiler fuel.

Although conversion to the burning of coal would be expected to increase the cost of operating at Jay 1 and 2, FEA proposes to find that such increased cost per barrel of oil saved is not unreasonable. This determineration is based on consideration of the substantial savings of petroleum products that will result from this conversion. The determination that the costs of converting are not unreasonable is further supported by consideration of such costs in relation to the expected remaining useful life of the boilers after conversion, the size and resources of International as examined in the following analysis of financial capability, the nature of the expected operation of these boilers, and potential future increases in the fuel cost differential in favor of coal.

3. *Financial capability of the owner.* a. *Recovery of capital investment.* FEA proposes to find that compliance with a Prohibition Order by Jay 1 and 2 would be economically feasible. FEA's analysis took into consideration the financial capability of the owner and is based upon the owner's financial position as reported in the Dun and Bradstreet Reference Book (March 1977). Where necessary, FEA performed an independent analysis of the owner's financial capability, considering such factors as the owner's current financial statement and the additional capital investment required for the owner to comply with this NOI and all other NOI's which are currently under consideration, as well as additional capital investment costs related to all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2 (a) and (c) of ESECA to MFBI's owned by International. FEA related these additional capital investment costs to the total capitalization of International and the remaining useful life after conversion of Jay 1 and 2.

FEA does not consider the effect of the added capital investment costs to represent an unreasonable burden given the financial capabilities of International to assume such costs.

b. *Total annual costs associated with conversion.* The total estimated annual increase in costs (amortized increased capital investment costs and other costs, exclusive of fuel costs) associated with the burning of coal as opposed to oil attributable to compliance with this NOI and all other NOI's which are currently under consideration has been determined. FEA also took into consideration total annual costs resulting from compliance with all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under the authority of Section 2(a) and (c) of ESECA to International MFBI's.

Notwithstanding the potential offsetting value of fuel cost savings attributable to compliance with this NOI, and all other NOI's currently under consideration, International's total annual costs after conversion will increase by $783,345.

B. Because the issuance of a Prohibition Order to Jay 1 and 2 will discourage the use of natural gas or petroleum products and encourage the increased use of coal, FEA proposes to conclude that this action would be consistent with the purpose of ESECA to provide a means to assist in meeting the essential needs of the United States for fuels.

On the basis of the environmental analysis which FEA is required to conduct prior to issuance of a Notice of Effectiveness of a Prohibition Order, as well as the necessity for these MFBI's to comply with the Clean Air Act and other applicable environmental protection requirements, FEA proposes to conclude that a Prohibition Order to Jay 1 and 2 would be consistent with the purpose of ESECA to provide for a means to assist in meeting the essential needs of the United States for fuels in a manner which is consistent, to the fullest extent practicable, with existing national commitments to protect and improve the environment.

III. COAL AND COAL TRANSPORTATION FACILITIES WILL BE AVAILABLE TO THESE MFBI'S DURING THE PERIOD UNTIL DECEMBER 31, 1984

A. *Coal availability.* 1. *National coal reserves.* United States coal reserves are more than sufficient to supply national needs for the foreseeable future. U.S. Department of the Interior, Bureau of Mines (BOM) data show a demonstrated coal reserve base of over 400 billion tons, over half of which is currently technically and economically recoverable (Demonstrated Coal Reserve Base of the United States, by Sulfur Category, January 1, 1974, Bureau of Mines (May 1975) (hereafter "BOM Survey")). Within these recoverable reserves approximately 200 billion tons contain 1 percent or less sulfur by weight. To determine when certain quantities of these reserves are expected to be available, FEA has examined several studies referenced herein, which together provide the best current evidence as to coal availability for the period ending December 31, 1984.

2. *National coal production and demand.* The comparison, stated below, of estimated national coal production, national coal demand, and the total tonnage of uncommitted planned national coal production (derived from responses to a survey of coal producing companies) shows that there should be sufficient production of coal to meet the national demand through 1980. Beyond 1980, plans for new production are not yet fully developed because few coal producers have firm expansion plans that extend that far into the future; however, the projected total planned national coal production for 1985 already meets 99 percent of the total U.S. demand expected in 1985. With time, more potential mine developments will become firm plans, thus increasing the planned production.

a. *National coal production.* It is conservatively estimated that it will be practicable to produce coal nationally in at least the following quantities:

Year:	*Production potential (million tons)*
1977	732.3
1978	791.6
1979	851.4
1980	911.7
1981	960.0
1982	994.3
1983	1,017.4
1984	1,028.7
1985	1,029.6

The figures shown above are derived from FEA's Coal Mine Expansion Study (May 1976). This study demonstrates that most coal producers did not have firm or accurate plans for new capacity additions beyond 1980. The 1985 projection, therefore, tends to underestimate actual production potential.

An FEA study, Coal Availability Report, April 1977 (hereafter "Availability Report"), indicates current plans for nationwide production of uncommitted coal as follows:

Year:	*Production (million tons)*
1978	124.3
1979	243.1
1980	293.3
1981	350.0
1982	369.9
1983	396.2
1984	475.5
1985	475.5
1985	544.9

b. *National demand exclusive of ESECA prohibition order demand.* The estimated national demand, excluding any increased demand resulting from FEA action under the authority of Section 2(a) of ESECA, is as follows (FEA 1976 National Energy Outlook):

Year:	*Demand (million tons)*
1978	730
1979	764
1980	799
1981	842
1982	887
1983	935
1984	985
1985	1,040

c. *National ESECA prohibition order demand.* The estimated potential demand for coal resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA is no more than the following ("Availability Report"):

Year:	*Demand (million tons)*
1978	11.0
1979	22.4
1980	32.5
1981	35.8
1982	57.4
1983	59.8
1984	59.8

3. *Characteristic coal production and demand.* FEA's "Availability Report" identifies coal of specific quality characteristics available for use at these MFBI's. The survey is based on data from 31 mining companies that supplied useful information on 96 mining units. Responses from these companies identified planned production of coal which is not now committed to a specific buyer. For those companies which did not respond to the survey, FEA estimated their uncommitted planned production based on their 1974 production.

a. *Characteristic coal requirements for these MFBI's.* FEA's "Availability Report" has determined that boilers of the type used at Jay 1 and 2 will be able to burn coal of the following characteristics and comply with all applicable air pollution control requirements.

Btu's/lb	[1] 10,000
Moisture (percent)	[2] 15
Ash (percent)	[2] 20
Volatile (percent)	[1] 15
Ash softening temp. (° F)	[1] 2,200
Sulfur (approximately)	[2] 2.5

[1] Minimum.
[2] Maximum.

b. *Characteristic coal demand from these MFBI's.* The potential demand for coal, of the type described above, which would result from this NOI is estimated to be as follows:

Year:	*Demand (thousand tons)*
1980 and thereafter	172

c. *National planned production, characteristic coal.* FEA's "Availability Report" has determined that coal of the type described in paragraph A.3.a., above, is uncommitted to a specific buyer and will be potentially available to these MFBI's in a nationwide market as follows:

Year:	*Production (thousand tons)*
1978	124,300
1979	243,100
1980	293,300
1981	350,000
1982	369,900
1983	396,200
1984	475,500

d. *National ESECA prohibition order demand for coal, regardless of characteristics.* The national planned production of characteristic coal, as stated in paragraph A.3.c., exceeds potential demand for coal regardless of characteristic expected from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. National ESECA Prohibition Order demand as previously stated in paragraph A.2.c., above, is no more than the following ("Availability Report"):

Year:	*Demand (thousand tons)*
1978	11,032
1979	22,434
1980	32,483
1981	35,755
1982	57,362
1983	59,815
1984	59,815

e. *Regional planned production, characteristic coal.* Coal with the characteristics described in paragraph A.3.a., above, is uncommitted and will be potentially available to these MFBI's (in a probable regional supply/demand relationship related to the location of these MFBI's) from BON Districts 1 through 6 as follows ("Availability Report"):

Year:	*Production (thousand tons)*
1978	23,998
1979	50,226
1980	59,538
1981	70,626
1982	74,364
1983	79,254
1984	96,525

f. *Regional ESECA prohibition order demand for coal, regardless of characteristic.* The expected regional production of characteristic coal, as stated in paragraph A.3.e., above, exceeds the potential demand for coal regardless of characteristic from BOM Districts 1 through 6 expected to result from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. This potential regional demand is estimated in FEA's "Availability Report" to be no more than the following:

Year:	*Demand (thousand tons)*
1978	2,090
1979	4,268
1980	6,504
1981	7,369
1982	17,258
1983	19,298
1984	19,298

g. *Regional ESECA prohibition order demand for coal by sulfur characteristic.* The potential regional demand for coal from BOM Districts 1 through 6 with a 2.21–2.51 percent sulfur content (which includes the 2.5 percent maximum sulfur content described in paragraph A.3.a., above) resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA is estimated in FEA's "Availability Report" to be no more than the following:

Year:	*Demand (thousand tons) percent sulfur 2.21–2.51*
1978	175
1979	555
1980	966
1981	966
1982	966
1983	3,006
1984	3,006

The regional planned production of coal stated in paragraph A.3.e., above, with the characteristics described in paragraph A.3.a., above, far exceeds this potential ESECA regional demand for coal by sulfur characteristic.

4. *State or local laws.* FEA has found no state or local laws or policies limiting the extraction or utilization of coal that would adversely affect these production figures, and none have been brought to FEA's attention.

5. *Conclusion.* FEA's "Availability Report" has identified nationally and in BOM Districts 1 through 6 uncommitted coal production that meets the requirements of Jay 1 and 2 as described in paragraph A.3.a., above. FEA proposes to find that this uncommitted coal exists in amounts sufficient in any year to meet the estimated additional demand for coal, both nationally and from these Districts, resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA.

Coal for these MFBI's will probably be bought from producers according to regional supply/demand relationships related to the MFBI's location from BOM Districts 1 through 6. FEA observes, however, that the MFBI's could purchase coal in other markets as such production becomes available. (The Feasibility of Considering Expanded Use of Western Coal by Midwestern and Eastern Utilities in the Period 1978 and Beyond, School of Engineering, University of Pennsylvania, November 7, 1975.)

B. *Coal transportation.*—1. *Location of MFBI's and coal supply.* Based on an FEA study, Coal Transportation Availability Report, April 1977 (hereafter "Transportation Availability Report"), coal for Jay 1 and 2 would probably come from BOM District 1 as the primary source of supply and from BOM District 2 as the alternate supply area. While these supply regions are the nearest available sources able to supply complying coal to Jay 1 and 2, complying coal could be transferred by rail from other identified sources within the United States as well. The analysis of transportation availability is based on the most likely route as well as two alternate routes. These routes were chosen to demonstrate transportation availability.

2. *Route of coal shipment.* The primary route for coal delivery for Jay 1 and 2 is to originate coal in the Altoona, Pennsylvania region in BOM District 1 on the Consolidated Railroad Corporation (ConRail). ConRail would move it to Boston, Massachusetts, where the Boston and Maine would pick it up and move it to Portland, Maine. The Maine Central would then deliver the coal to Jay 1 and 2. The total rail distance is about 720 miles.

The alternate route from the primary supply area orignates coal from BOM District 1 on Conrail to their docks at Ashtabula Harbor, Ohio where it would be loaded on self-propelled carriers or barges and carried to unloading docks in Montreal, Canada. The Canadian National and Grand Trunk Railway would move it to Danville Junction, Maine where the Maine Central would pick up the coal and deliver it to Jay 1 and 2. The total rail distance is about 480 miles with a water leg of about 500 miles.

An alternate route from the alternate supply area would orignate coal in Washington and Greene Counties, Pennsylvania, in BOM District 2 from mines served by Conrail which would move it via Pittsburgh, Pennsylvania, and Buffalo, New York, to Worcester, Massachusetts. The Boston and Maine would then move the coal via Lowell and Haverhill, Massachusetts, to Portland, Maine. The Maine Central Railroad would deliver it to Jay 1 and 2. The total rail distance is about 975 miles.

3. *Originating trunk carrier.* ConRail, the originating carrier of coal from both the primary and alternate sources for Jay 1 and 2 has approximately 47,000 hopper cars in service with an active repair and replacement program. Using an average number of 20 deliveries per year per 79 ton car, ConRail may require as many as 127 additional cars to handle the increased demand from Jay 1 and 2. This estimate assumes that the railroad would neither have excess originating capacity nor obtain cars from other carries in the originating vicinity. Their capacity to build new hopper cars in their own shops exceeds 6,000 per year, and they anticipate no significant constraints in adding adequate capacity for all foreseeable demands.

FEA's "Transportation Availability Report" concluded that for all potential Prohibition Order candidates studied, there would be no major constraints in transporting coal. This study examined existing rail transportation car capacity, water transportation capacity, including unloading docks, where applicable, and took into account projections made by all carriers to meet the anticipated demand for all types of transportation facilities assuming all MFBI's studied were to receive orders under section 2(a) of ESECA. FEA has not found nor has it been informed of any apparent constraints to carrying coal for any alternate or intermediate carriers should they be used.

4. *Destination carrier and MFBI's facilities.* Freight service to Jay 1 and 2 is provided by the Maine Central as illustrated above. Jay 1 and 2 have indicated that coal receiving, storage, and handling equipment would need to be installed. It is expected that these installations can be accomplished prior to the effective date for coal burning.

There are no other obstacles to the delivery of coal to Jay 1 and 2.

5. *Conclusion.* Coal transportation facilities will be available for the period a Prohibition Order is expected to be in effect since no major constraints to coal delivery over the primary route to Jay 1 and 2 presently exist, and alternate routes are available.

APPENDIX B—PROPOSED FINDINGS AND RATIONALE FOR NOTICE OF INTENTION TO ISSUE A PROHIBITION ORDER

ESECA and the FEA regulations require FEA to make certain findings before issuing a Prohibition Order to a major fuel burning installation (MFBI). FEA's proposed findings are set out below with respect to the MFBI's named below. Supporting rationale and conclusions are also set forth.

Docket No.	Owner	Installation	Unit No.	Location
OCU-1888	Fraser Paper Ltd.	Madawaska Mill	6,7	Madawaska, Maine.

These findings, which are now proposed by FEA, are based on the information that has been provided to and developed by FEA prior to the issuance of this Notice of Intention (NOI) to issue a Prohibition Order.

Fraser Paper Ltd. shall be referred to as the "owner" and as "Fraser Paper". Madawaska Units 6 and 7 shall be referred to as the "MFBI's" and as "Madawaska 6 and 7".

I. CAPABILITY AND NECESSARY PLANT EQUIPMENT TO BURN COAL

FEA proposes to find that on June 22, 1974, Madawaska 6 and 7 had the capability and necessary plant equipment to burn coal. This proposed finding is based on the facts and interpretations stated below:

A. Fraser Paper, in a Major Fuel Burning Installation Coal Conversion Report, Section II, Questions 6, and 12–14, (Form FEA C–602–S–0), filed on March 31, 1975, indicated that each MFBI had in place on June 22, 1974, a boiler that was capable of burning coal. The boilers had been designed and constructed or modified to burn coal as their primary energy source, notwithstanding the fact that on June 22, 1974, the MFBI's may not have been burning coal as their primary energy source.

B. Based on information Fraser Paper filed with FEA dated July 23, 1976, and other information available to FEA, the following plant equipment and facilities at Madawaska 6 and 7 would have to be acquired or refurbished in order for these MFBI's to burn coal as their primary energy source: 1. Combustors; 2. Soot blowers; 3. Unloaders; 4. Conveyors; 5. Crushers; 6. Pulverizers; 7. Scales; 8. Feeders; 9. Special instrumentation and controls; 10. Ash handling and ponding; 11. Additional storage property; 12. Bunkers; 13. Building.

C. FEA proposes to find that on June 22, 1974, Madawaska 6 and 7 had all other significant plant equipment and facilities associated with the burning of coal.

D. Within the meaning of ESECA and the regulations promulgated pursuant thereto, the equipment and facilities listed in paragraph B, above, do not individually or in combination constitute a lack of capability and necessary plant equipment to burn coal as of June 22, 1974.

II. THE BURNING OF COAL IN LIEU OF NATURAL GAS OR PETROLEUM PRODUCTS IS PRACTICABLE AND CONSISTENT WITH THE PURPOSES OF ESECA.

FEA proposes to find that the burning of coal in lieu of petroleum products or natural gas at Madawaska 6 and 7 is practicable and consistent with the purposes of ESECA. This proposed finding is based upon an analysis by FEA of the fuel consumption of these boilers for the period 1973–1977, the remaining useful service life of each boiler after conversion, the net operating cost differential that would result from compliance with a Prohibition Order, as well as the facts and interpretations referenced below:

A. *The burning of coal is practicable.*—1. *Costs associated with burning coal.*

a. *Capital investment costs.* The total estimated initial capital investment costs, including financial costs, that would result from the acquisition and refurbishment of equipment and facilities associated with the burning of coal at Madawaska 6 and 7 have been determined.

This determination was based on existing FEA information and analysis as well as information filed with FEA by the owner. Approximate costs to comply with applicable environmental protection requirements have also been considered, including the cost of compliance with the air pollution control requirements of the Clean Air Act.

b. *Annual operating and maintenance costs.* The expected increase in operating and maintenance costs, exclusive of fuel costs, that would result from the burning of coal has been calculated based on information supplied by the owner or otherwise acquired by FEA.

c. *Fuel costs.* Based on an analysis of annual fuel consumption and fuel cost information supplied by the owner and/or, in appropriate circumstances, upon FEA's fuel

cost estimates, FEA has determined that the burning of coal in lieu of natural gas or petroleum products at Madawaska 6 and 7 will result in a decrease in annual fuel costs.

d. *Net operating cost differential.* Based on the factors stated in paragraphs A.1. a.–c., above, as well as the expected remaining useful life of the boilers after conversion, FEA has determined that the net annual operating cost differential (which represents the difference between operating the boilers with coal and alternate fuel(s) as their primary energy source), resulting from the conversion of Madawaska 6 and 7 will represent an annual savings.

2. *Reasonableness of costs of conversion.* The foregoing analysis of the costs of conversion provided the basis for deciding whether the conversion of Madawaska 6 and 7 is reasonable.

As a result of conversion, Fraser Paper will incur additional capital investment costs, including financing costs, and additional annual operating and maintenance costs, exclusive of fuel costs, but will experience an annual savings in its total fuel costs for the expected remaining useful service life of the boilers after conversion.

Since all increased costs of conversion will be offset by the decrease in fuel costs, an average net decrease in the annual cost of operation of the boilers should result.

The use of coal at Madawaska 6 and 7 will result in a substantial annual savings of barrels of oil that otherwise would be used as a boiler fuel.

FEA proposes to find that, since the increase in capital investment costs and operating and maintenance costs at Madawaska 6 and 7 are totally offset by the current fuel cost differential between oil and coal burning at Madawaska 6 and 7, and potential future increases in the fuel cost differential, in favor of coal, the additional costs associated with burning coal are reasonable.

3. *Financial capability of the owner.*— a. *Recovery of capital investment.* FEA proposes to find that compliance with a Prohibition Order by Madawaska 6 and 7 would be economically feasible. FEA's analysis took into consideration the financial capability of the owner and is based upon the owner's financial position as reported in the *Dun and Bradstreet Reference Book* (March 1977).

Where necessary, FEA performed an independent analysis of the owner's financial capability, considering such factors as the owner's current financial statement and the additional capital investment required for the owner to comply with this NOI and all other NOI's which are currently under consideration, as well as additional capital investment costs related to all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2 (a) and (c) of ESECA to MFBI's owned by Fraser Paper. FEA related these additional capital investment costs to the total capitalization of Fraser Paper and the remaining useful life after conversion of Madawaska 6 and 7.

FEA does not consider the effect of the added capital investment costs to represent an unreasonable burden given the financial capabilities of Fraser Paper to assume such costs.

b. *Total annual costs associated with conversion.* The total estimated annual increase in costs (amortized increased capital investment costs and costs exclusive of fuel costs) associated with the burning of coal as opposed to oil attributable to compliance with this NOI and all other NOI's which are currently under consideration has been determined. FEA also took into consideration total annual costs resulting from compliance with all other Notices of Intention, to date, if any to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2(a) and (c) of ESECA to Fraser Paper MFBI's.

However, due to the potential offsetting value of fuel cost savings attributable to compliance with this NOI and all other NOI's currently under consideration, Fraser Paper's total annual costs after conversion should decrease.

B. *Consistency with the purposes of ESECA.* Because the issuance of a Prohibition Order to Madawaska 6 and 7 will discourage the use of natural gas or petroleum products and encourage the increased use of coal, FEA proposes to conclude that this action would be consistent with the purpose of ESECA to provide a means to assist in meeting the essential needs of the United States for fuels.

On the basis of the environmental analysis which FEA is required to conduct prior to issuance of a Notice of Effectiveness of a Prohibition Order, as well as the necessity for these MFBI's to comply with the Clean Air Act and other applicable environmental protection requirements, FEA proposes to conclude that a Prohibition Order to Madawaska 6 and 7 would be consistent with the purpose of ESECA to provide for a means to assist in meeting the essential needs of the United States for fuels in a manner which is consistent, to the fullest extent practicable, with existing national commitments to protect and improve the environment.

III. COAL AND COAL TRANSPORTATION FACILITIES WILL BE AVAILABLE TO THESE MFBI'S DURING THE PERIOD UNTIL DECEMBER 31, 1984

A. *Coal availability.*—1. *National coal reserves.* United States coal reserves are more than sufficient to supply national needs for the foreseeable future. U.S. Department of the Interior, Bureau of Mines (BOM) data show a demonstrated coal reserve base of over 400 billion tons, over half of which is currently technically and economically recoverable (*Demonstrated Coal Reserve Base of the United States, by Sulfur Category, on January 1, 1974*, Bureau of Mines (May 1975) [hereafter "BOM Survey"]). Within these recoverable reserves approximately 200 billion tons contain 1 percent or less sulfur by weight. To determine when certain quantities of these reserves are expected to be available, FEA has examined several studies referenced herein, which together provide the best current evidence as to coal availability for the period ending December 31, 1984.

2. *National coal production and demand.* The comparison, stated below, of estimated national coal production, national coal demand, and the total tonnage of uncommitted planned national coal production (derived from responses to a survey of coal producing companies) shows that there should be sufficient production of coal to meet the total national demand through 1980. Beyond 1980, plans for new production are not yet fully developed because few coal producers have firm expansion plans that extend that far into the future; however, the projected total planned national coal production for 1985 already meets 99 percent of the total U.S. demand expected in 1985. With time, more potential mine developments will become firm plans, thus increasing the planned production.

a. *National coal production.* It is conservatively estimated that it will be practicable to produce coal nationally in at least the following quantities:

Year:	*Production potential (million tons)*
1977	732.3
1978	791.6
1979	851.4
1980	911.7
1981	960.0
1982	994.3
1983	1,017.4
1984	1,028.7
1985	1,029.6

The figures shown above are derived from FEA's *Coal Mine Expansion Study* (May 1976). This study demonstrates that most coal producers did not have firm or accurate plans for new capacity additions beyond 1980. The 1985 projection, therefore, tends to underestimate actual production potential.

An FEA study, *Coal Availability Report*, April 1977 (hereafter "Availability Report"), indicates current plans for nationwide production of uncommitted coal as follows:

Year:	*Production (million tons)*
1978	124.3
1979	243.1
1980	243.3
1981	350.0
1982	369.9
1983	396.2
1984	475.5
1985	544.9

(b) *National demand exclusive of ESECA prohibition order demand.* The estimated national demand, excluding any increased demand resulting from FEA action under the authority of Section 2(a) of ESECA, is as follows (FEA 1976 National Energy Outlook):

Year:	*Demand (million tons)*
1978	730
1979	764
1980	799
1981	842
1982	887
1983	935
1984	985
1985	1,040

c. *National ESECA prohibition order demand.* The estimated potential demand for coal resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA is no more than the following ("Availability Report"):

Year:	*Demand (million tons)*
1978	11.0
1979	22.4
1980	32.5
1981	35.8
1982	57.4
1983	59.8
1984	59.8

3. *Characteristic coal production and demand.* FEA's "Availability Report" identifies coal of specific quality characteristics available for use at these MFBI's. The survey is based on data from 31 mining companies that supplied useful information on 96 mining units. Responses from these companies identified planned production of coal which is not now committed to a specific buyer. For those companies which did not

respond to the survey, FEA estimated their uncommitted planned production based on their 1974 production.

a. *Characteristic coal requirements for these MFBI's.* FEA's "Availability Report" has determined that boilers of the type used at Madawaska 6 and 7 will be able to burn coal of the following characteristics and comply with all applicable air pollution control requirements.

BTU's/lb	[1] 10,000
Moisture (percent)	[2] 15
Ash (percent)	[2] 20
Volatile (percent)	[1] 15
Ash softening temp. (°F)	[1] 2,200
Sulfur (approximately) (percent)	[2] 2.5

[1] Minimum.
[2] Maximum.

b. *Characteristic coal demand from these MFBI's.* The potential demand for coal, of the type described above, which would result from this NOI is estimated to be as follows:

Year:	Demand (thousand tons)
1978 and thereafter	175

c. *National planned production, characteristic coal.* FEA's "Availability Report" has determined that coal of the type described in paragraph A.3.a., above, is uncommitted to a specific buyer and will be potentially available to these MFBI's in a nationwide market as follows:

Year:	Production (thousand tons)
1978	124,300
1979	243,100
1980	293,300
1981	350,000
1982	369,900
1983	396,200
1984	475,500

d. *National ESECA prohibition order demand for coal, regardless of characteristics.* The national planned production of characteristic coal, as stated in paragraph A.3.c., above, exceeds potential demand for coal regardless of characteristic expected from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. National ESECA Prohibition Order demand as previously stated in paragraph A.2.c., above, is no more than the following ("Availability Report"):

Year:	Demand (thousand tons)
1978	11,032
1979	22,434
1980	32,483
1981	35,755
1982	57,362
1983	59,815
1984	59,815

e. *Regional planned production, characteristic coal.* Coal with the characteristics described in paragraph A.3.a., above, is uncommitted and will be potentially available to these MFBI's (in a probable regional supply/demand relationship related to the location of these MFBI's) from BOM Districts 1 through 6 as follows ("Availability Report"):

Year:	Production (thousand tons)
1978	23,998
1979	50,226
1980	59,538
1981	70,626
1982	74,364
1983	79,254
1984	96,525

f. *Regional ESECA prohibition order demand for coal, regardless of characteristic.* The expected regional production of characteristic coal, as stated in paragraph A.3.e., above, exceeds the potential demand for coal regardless of characteristic from BOM Districts 1 through 6 expected to result from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. This potential regional demand is estimated in FEA's "Availability Report" to be no more than the following:

Year:	Demand (thousand tons)
1978	2,090
1979	4,268
1980	6,504
1981	7,369
1982	17,258
1983	19,298
1984	19,298

g. *Regional ESECA prohibition order demand for coal by sulfur characteristic.* The potential regional demand for coal from BOM Districts 1 through 6 with 2.21–2.51 percent sulfur content (which includes the 2.5 percent maximum sulfur content described in paragraph A.3.a., above) resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA is estimated in FEA's "Availability Report" to be no more than the following:

Year:	Demand (thousand tons), percent sulfur 2.21–2.51
1978	175
1979	555
1980	966
1981	966
1982	966
1983	3,006
1984	3,006

The regional planned production of coal stated in paragraph A.3.e., above, with the characteristics described in paragraph A.3.a., above, far exceeds this potential ESECA regional demand for coal by sulfur characteristic.

4. *State or local laws.* FEA has found no state or local laws or policies limiting the extraction or utilization of coal that would adversely affect these production figures, and none have been brought to FEA's attention.

5. *Conclusion.* FEA's "Availability Report" has identified nationally and in BOM Districts 1 through 6 uncommitted coal production that meets the requirements of Madawaska 6 and 7 as described in paragraph A.3.a., above. FEA proposes to find that this uncommitted coal exists in amounts sufficient in any year to meet the estimated demand for coal, both nationally and from these Districts, resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA.

Coal for these MFBI's will probably be brought from producers according to regional supply/demand relationships related to the MFBI's location from BOM Districts 1 through 6. FEA observes, however, that the MFBI's could purchase coal in other markets as such production becomes available. (The Feasibility of Considering Expanded Use of Western Coal by Midwestern and Eastern Utilities in the Period 1978 and beyond, School of Engineering, University of Pennsylvania, November 7, 1975.)

B. *Coal transportation.*—1. *Location of MFBI's and coal supply.* Based on an FEA study, Coal Transportation Availability Report, April 1977 (hereafter "Transportation Availability Report"), coal for Madawaska 6 and 7 would probably come from BOM District 1 as the primary supply area and from BOM District 2 as the alternate supply area. While these supply regions are the nearest available sources able to supply complying coal to the plant, complying coal could be transferred by rail from other identified sources within the United States as well. The analysis of transportation availability is based on the most likely route as well as two alternate routes. These routes were chosen to demonstrate transportation availability.

2. *Route of coal shipment.* The primary route for coal delivery for Madawaska 6 and 7 is to originate coal in BOM District 1 in the Altoona, Pennsylvania region on Consolidated Railroad Corporation (Conrail) which would move it to Boston, Massachusetts. The Boston and Maine Railroad would pick it up and move it to Portland, Maine. From Portland, the Maine Central would move the coal via Augusta to Bangor and then the Bangor and Aroostook Railroad would pick it up and deliver it to Madawaska 6 and 7. The total rail distance is about 1,015 miles.

The alternate route from the primary supply area would originate coal on Conrail to its docks at Ashtabula Harbor, Ohio. Self-propelled carriers or barges would move it through the Welland Canal, Lake Ontario and the St. Lawrence River to coal docks at Quebec, Canada. The Canadian National Railroad would then move the coal to St. Leonard, New Brunswick and the Bangor and Aroostook would deliver it to Madawaska 6 and 7. The total rail distance is about 400 miles, with a water leg of about 600 miles.

As an alternate route from an alternate source, coal would originate in Greene and Washington Counties, Pennsylvania in BOM District 2 and be moved by Conrail via Pittsburgh, Pennsylvania, and Buffalo, New York, to Worcester, Massachusetts. The Boston and Maine would move it via Lowell and Haverhill, Massachusetts, to Portland, Maine. The Maine Central would then move the coal via Augusta to Bangor, Maine, and the Bangor and Aroostook Railroad would deliver it to Madawaska 6 and 7. The total rail distance is about 1,260 miles.

3. *Originating trunk carrier.* Conrail, the originator of coal for Madawaska 6 and 7 has approximately 47,000 hopper cars in service, and capacity in its shops to build over 6,000 new hopper cars per year. Using an average of 20 deliveries per year per 79 ton car, Conrail may need as many as 95 additional cars to handle the increased demand from Madawaska 6 and 7. This estimate assumes that the railroad would neither have excess originating capacity nor obtain cars from other carriers in the originating vicinity. Conrail visualizes no difficulty in increasing capacity to meet this and other foreseeable increases in demand.

FEA's "Transportation Availability Report" concluded that for all potential Prohibition Order candidates studied, there would be no major constraints in transporting coal. This study examined existing rail transportation car capacity, water transportation capacity, including unloading docks, where applicable, and took into account projections made by all carriers to meet the anticipated demand for all types of transportation facilities assuming all MFBI's studied were to receive orders under Section 2(a) of ESECA.

FEA has not found nor has it been informed of any apparent constraints to car-

rying coal for any alternate or intermediate carriers should they be used.

4. *Destination carrier and MFBI facilities.* The Bangor and Aroostook Railroad is the destination carrier to Madawaska 6 and 7. Coal was used as the primary boiler fuel at Madawaska 6 and 7 until 1969. The plant reports that coal receiving and handling facilities will have to be reinstalled and some facilities moved. It is expected that these repairs can be accomplished prior to the effective date for coal burning.

There are no other obstacles to the delivery of coal to Madawaska 6 and 7.

5. *Conclusion.* Coal transportation facilities will be available for the period a Prohibition Order is expected to be in effect since no major constraints to coal delivery over the primary route to Madawaska 6 and 7 presently exist, and alternate routes are available.

[FR Doc.77-13696 Filed 5-12-77;8:45 am]

ENERGY SUPPLY AND ENVIRONMENTAL COORDINATION ACT

Intention To Issue Prohibition Orders to Certain Installations; International Paper Co.

The Federal Energy Administration (FEA) hereby gives notice of its intention to issue Prohibition Orders, pursuant to the authorities granted it by Section 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974, as amended (ESECA), and Title 10, Code of Federal Regulations (10 CFR), Parts 303 and 305 to the following installations:

Docket No.	Owner	Installation	Unit No.	Location
OCU-0779	International Paper Co.	Texarkana plant	1	Texarkana, Tex.
OCU-0786	do.	Pine Bluff plant	1,2	Pine Bluff, Ark.

FEA hereby also gives notice of the opportunity for oral and written presentation of data, views, and arguments by interested persons regarding these proposed Prohibition Orders.

The proposed orders would prohibit the above-named installations from burning natural gas or petroleum products as their primary energy source.

Prior to the issuance of a Prohibition Order to an installation, Section 2(a) of ESECA and 10 CFR 303.36(b) and 305.4(b) require that FEA find that the installation had the capability and necessary plant equipment to burn coal as of June 22, 1974. A Prohibition Order may not be issued unless FEA can find that the prohibition of the utilization of natural gas or petroleum products as a primary energy source is practicable and consistent with the purposes of ESECA and that coal and coal transportation facilities will be available during the period the Prohibition Order will be in effect. FEA's proposed findings, as well as its proposed conclusions and rationale with respect to these findings, for each installation are set out in the Appendix to this notice. These findings, conclusions and rationale may be amended as a result of comments received by FEA pursuant to this notice and other information available to FEA. The findings, conclusions and rationale will be included, with any amendments, for each Prohibition Order that is issued.

Upon completion of the proceedings described in this notice, FEA may determine to issue Prohibition Orders to some or all of the above-named installations. These Prohibition Orders will not become effective, however, until (1) either (a) the Administrator of the Environmental Protection Agency (EPA) notifies the FEA, in accordance with Section 119(d)(1)(B) of the Clean Air Act, that the installation is able to burn coal and to comply with all applicable air pollution control requirements without a compliance date extension under Section 119(c) of such Act, or (b) if such notification is not given by EPA, the date that the Administrator of EPA certifies, pursuant to Section 119(d)(1)(B) of the Clean Air Act, is the earliest date that the installation will be able to comply with all applicable requirements of Section 119 of that Act, and (2) FEA has considered the environmental impact of making the order effective, pursuant to 10 CFR 208.3(a)(4) and 305.9, and has served the affected installation with a Notice of Effectiveness, as provided in 10 CFR 303.10(b), 303.37(b) and 305.7. The date the Prohibition Order will be effective will be stated in the Notice of Effectiveness.

10 CFR 305.9 requires that, prior to issuance of a Notice of Effectiveness to an installation, FEA shall perform an analysis of the environmental impact of the issuance of such Notice of Effectiveness. That analysis shall result in either (1) issuance of a declaration that the Prohibition Order will not, if made effective by issuance of a Notice of Effectiveness, be likely to have a significant impact on the quality of the human environment, or (2) the preparation by FEA of an environmental impact statement covering significant site-specific impacts that are likely to result from the Prohibition Order and that have not been adequately addressed in the Final Programmatic Environmental Impact Statement or in other official documents made publicly available. If FEA prepares an environmental impact statement covering significant site-specific impacts resulting from making a Prohibition Order effective, the statement shall be prepared and published for comment in accordance with Section 102(2)(C) of the National Environmental Policy Act of 1969 prior to issuance of a Notice of Effectiveness. Interested persons may request a public hearing pursuant to 10 CFR 303.173 to comment on the contents of a draft environmental impact statement. With respect to comments regarding any impact on air quality that might result from a proposed Prohibition Order, however, it should be recognized that ESECA has assigned to EPA the primary responsibility for analyzing the effect of any such order on the Nation's air quality and for determining the applicable air pollution control requirements that apply to the installation that has been issued an order. It is expected that, in almost every case, an installation to which a Prohibition Order is issued will be eligible to apply to EPA for a compliance date extension. In connection with that application, EPA must also provide an opportunity for written comment and oral presentation of data, views, and arguments by interested persons. Enclosed with the Notice of Effectiveness may be a compliance reporting schedule to insure that the installation will be able to comply with the prohibition of the burning of natural gas or petroleum products as a primary energy source on the effective date specified in the Notice of Effectiveness.

Public comment on the proposals to issue Prohibition Orders to the installations listed above is invited in the form of written and oral presentation of data, views, and arguments. Comments should relate to individual docket numbers and should make clear to which docket number the individual comment is addressed.

Comments should address (1) the adequacy and validity of each of the proposed findings and the conclusions and rationale in support of these findings, (2) the environmental impact of making effective a Prohibition Order, including any site-specific environmental impacts, and (3) any other aspects or impacts of the proposed Prohibition Order believed to be relevant.

Pursuant to 10 CFR 303.173 (a) and (d) and 305.5, FEA hereby announces that a public hearing to receive oral presentation of data, views, and arguments of interested persons will be held beginning at 9 a.m. on May 24 and 25, 1977, in Room 250, Federal Energy Administration, 2626 West Mockingbird Lane, Dallas, Texas 75235. Any person who has an interest in the subject of the hearing or who is a representative of a group or class of persons which has an interest in the subject of the hearing may make a written request, or a verbal request if confirmed in writing, for an opportunity to make an oral presentation. That request should be directed to Darryl Greenwell, FEA Region VI, 2626 West Mockingbird Lane, Dallas, Texas 75235, 214-749-7727. The request should be received before 4:30 p.m., Thursday, May 19, 1977. The request should describe the person's interest in the issue(s) involved; if appropriate, it should state why the person is an appropriate representative of the group or class of persons which has such an interest; it should give a concise summary of the proposed oral presentation and a phone number where the person may be contacted through May 23, 1977. Speakers should submit ten (10) copies of their oral presentation if possible, unless such presentation is less than five (5) pages, in which case only one copy is required, to Delbert Fowler, Regional Administrator, Federal Energy Administration, P.O. Box 35228, 2626 West Mockingbird Lane, Dallas, Texas 75235, before 4:30 p.m., Monday, May 23, 1977. Speakers will be contacted by an FEA representative before 4:30 p.m., Fri-

day, May 20, 1977, to confirm receipt of the written request.

Detailed technical data, views, and arguments should be contained in a written submission in support of the oral presentation. The oral presentation itself should be a summary of those written comments.

While FEA will endeavor to provide adequate opportunity to all who desire to speak, FEA reserves the right to limit the number of persons to be heard at the hearing, to schedule their respective presentations and to establish the procedures governing the conduct of the hearing. The length of time allocated to each presentation may be limited on the basis of the number of persons requesting to be heard. The FEA will prepare an agenda that shall provide, to the extent possible, for the presentation of all relevant data, views, and arguments.

An FEA official will be designated to preside at the hearing which will not be a judicial or evidentiary hearing. During oral presentations only those conducting the hearing may ask questions. There will be no cross-examination. At the conclusion of all initial oral presentations, each person who has made an oral statement will be given the opportunity, if he or she so desires, to make a rebuttal statement. The rebuttal statements will be given in the order in which the initial statements were made and will be subject to time limitations.

Any interested person may submit written questions to the presiding officer to be asked of any person making an oral presentation. The presiding officer will determine whether to ask the question, having first determined whether the question is relevant, and whether adequate time may be afforded for an answer.

Any further procedural rules needed for the proper conduct of the hearing will be announced by the presiding officer.

A transcript of the hearing will be made and it, together with any written comments submitted in the course of the hearing, will be retained by the FEA and made available for inspection and copying at the Freedom of Information Reading Room, Room 2107, Federal Building, 12th and Pennsylvania Avenue NW., Washington, D.C. 20461, and the FEA Regional Office, Reading Room, 2626 West Mockingbird Lane, Dallas, Texas 75235, between the hours of 8 a.m. and 4:30 p.m., Monday through Friday. Anyone may purchase a copy of the transcript from the reporter.

Interested persons are invited to submit written comments consisting of data, views, and arguments with respect to these proposed Prohibition Orders to Executive Communications, Box MK, Federal Energy Administration, Federal Building, Room 3317, 12th and Pennsylvania Avenue NW., Washington, D.C. 20461.

Comments and other documents submitted to FEA Executive Communications should be identified on the outside of the envelope in which they are transmitted and on the document itself with the designation "Proposed Prohibition Order for the _____ Installation." Fifteen (15) copies should be submitted.

All written comments received by 4:30 p.m., Tuesday, June 14, 1977, all oral presentations, and all other relevant information submitted to or available to FEA will be considered by FEA prior to issuance of a Prohibition Order.

Any information or data considered to be confidential by the person furnishing it must be so identified and submitted in writing, one copy only. The FEA reserves the right to determine the confidential status of the information or data and to treat it in accordance with that determination.

Copies of the regulations implementing Section 2 (a) and (b) of ESECA (10 CFR Parts 303 and 305) are available from the following FEA Regional Offices:

Region, Address, and Phone
I. Robert Mitchell, Regional Administrator, 150 Causeway Street, Room 700, Boston, Massachusetts 02114—617–223–3701.
II. Alfred Kleinfield, Regional Administrator, 26 Federal Plaza, Room 3206, New York, New York 10007—212–264–1021.
III. J. A. LaSala, Regional Administrator, 1421 Cherry Street, Room 1001, Philadelphia, Pennsylvania 19102—215–597–3390.
IV. Donald Allen, Regional Administrator, 1655 Peachtree Street, NE, 8th Floor, Atlanta, Georgia 30309—404–526–2837.
V. N. Allan Andersen, Regional Administrator, Federal Office Building, 175 West Jackson Blvd., Room A–333, Chicago, Illinois 60604—312–353–0540.
VI. Delbert Fowler, Regional Administrator, Post Office Box 35228, 2626 West Mockingbird Lane, Dallas, Texas 75235—214–749–7345.
VII. Neil Adams, Regional Administrator, 1150 Grand Avenue, Kansas City, Missouri 64106—816–374–2061.
VIII. Dudley Faver, Regional Administrator, Post Office Box 26247, Belmar Branch, 1075 South Yukon Street, Lakewood, Colorado 80226—303–234–2470.
IX. William Arntz, Regional Administrator, 111 Pine Street, San Francisco, California 94111—415–556–7216.
X. Jack B. Robertson, Regional Administrator, 1992 Federal Building, 915 Second Avenue, Seattle, Washington 98174—206–442–7280.

MFBI Prohibition Order Candidate Identification and Selection Methodology

FEA has engaged in a two year, two part, process in which it first identified, after extensive information gathering, the potential universe of major fuel burning installations (MFBI's) in order to determine which MFBI's might be subject to Prohibition Orders. FEA then performed a detailed analysis of individual potential order recipients to determine whether facts would warrant publication of a Notice of Intention (NOI) to Issue a Prohibition Order to any of the potential order recipients.

I. Determination of Candidate Universe

On March 20, 1975, by Notice in the Federal Register (40 FR 12706), FEA required MFBI's with design firing rates in excess of 100 million BTU's per hour to provide basic identifying information. (FEA in its regulations published on May 9, 1975, (40 FR 20463) adopted the 100 million BTU's per hour design firing rate as the minimum size MFBI that would be eligible for a Prohibition Order.)

On April 18, 1975, FEA published notice in the Federal Register (40 FR 17328) that it would mail to all then known MFBI's a questionnaire, entitled "Major Fuel Burning Installation Coal Conversion Report" (Form FEA C–602–S–0), designed to provide FEA with additional information needed to help determine whether the MFBI's would be candidates for Prohibition Orders. Questionnaires were mailed to those respondents to the March 20, 1975, Federal Register notice and to other MFBI's identified through data provided by FEA regional personnel, the Environmental Protection Agency, other Federal agencies, and through contact with trade associations. A total of 822 parent companies responded to the survey, identifying 3,482 installations and 6,289 individual units.

The first survey provided FEA with historical information on quantity and quality of fuel use and preliminary pollution control data relative to the facilities in question.

Compilation and evaluation of the information received from the survey led to development of a supplemental questionnaire (Form FEA C–602–S–1) to elicit data on the financial situation of owners of MFBI's, including information designed to ascertain what the effects of a Prohibition Order would be on an individual company basis. This questionnaire was designed to provide a basis for subsequent analysis of the MFBI in terms of financial capability, additional capital investment costs resulting from a Prohibition Order, operating cost differentials and coal and coal transportation availability. This supplemental questionnaire was sent in June 1976 to various owners of MFBI's to obtain information on 161 sites and 281 individual units.

Most of the supplemental questionnaires (involving 138 sites and 246 units) were sent to owners of MFBI's identified as capable of burning coal in the first questionnaire and which, in 1974, burned at least 150,000 barrels of oil or 921,000,000 cubic feet of natural gas or a BTU equivalent combination. These MFBI's were chosen because of their potential for large fuel savings and the potential low conversion costs to fuel savings ratio.

The other supplemental questionnaires were sent to MFBI's which had indicated an intention to discontinue coal use (23 sites at which there were 35 units).

In September 1976, after responses to the supplemental questionnaires had been received, FEA consulted with the Environmental Protection Agency (EPA) to obtain EPA's best estimate as to the means by which these MFBI's could burn coal and comply with all applicable air pollution control requirements. EPA indicated whether particular MFBI's would require upgrading, or installation of electrostatic precipitators, installation of flue-gas desulfurization devices, or whether the MFBI could burn coal that would conform to air pollution control

requirements without pollution control equipment.

II. SITE SPECIFIC ANALYSIS

Once FEA had gathered the supplemental data relating to the 161 sites, it then conducted a technical analysis for each respondent to the supplemental questionnaire.

FEA prepared a technical summary based on the information provided to enable the Agency to analyze each respondent's potential amenability to receipt of an NOI. The technical summary consisted of the following data:

a. Expected remaining useful life (respondent's and FEA's estimates);

b. Unit capacity;

c. Fuel consumption for 1975;

d. The last year coal was burned at the installation;

e. Costs of converting to coal, including pollution control equipment costs, if any respondent's and FEA's estimates);

f. Type of pollution control equipment, if any, required (repondent's and EPA's estimates); and

g. Other relevant factors, such as percent sulfur content in coal that would be required to insure compliance with environmental standards.

FEA eliminated or deferred from further consideration those MFBI's for which the following criteria were applicable:

a. Remaining useful life of the MFBI on January 1, 1978 would be less than one year (based on an expected useful life of 40 years);

b. The utilization factor of the MFBI was less than 20 percent;

c. Space required for coal use at the installation was inadequate or unavailable;

d. Since filing the original questionnaire, the MFBI had been converted to coal as its primary energy source or the owner has certified that the MFBI will be so converted in the near future;

e. The MFBI used (in the latest year for which fuel use figures are available) significantly less than 2×10^{12} BTU's of oil or natural gas.

Items a or b above would prevent FEA from finding that burning coal by the MFBI would be practicable. FEA assumed a forty-year useful life as a reasonable estimate based on general industrial averages. FEA has decided not to analyze MFBI's that have already converted to coal, since the basic purposes of ESECA have already been accomplished by such conversions and FEA has concluded that its resources would be better allocated by concentrating on those MFBI's which are not now burning coal.

Certain MFBI's were eliminated from further analysis upon FEA's determination that one or more of the factors which FEA must consider pursuant to § 305.4(c) of its regulations would have resulted in disqualification of a particular MFBI. Such eliminations were based on factors such as process fuel uses peculiar to the MFBI's, inadequate land or space for coal related facilities, unique or unusual environmental constraints, and other similar disqualifying considerations.

If in FEA's judgment, analysis of the summary information raised issues that required further investigation, FEA conducted visits to the specific sites. Site visits were employed in circumstances in which large discrepancies between FEA's and the MFBI's cost estimates were observed, unusual technical problems were presented by the MFBI with respect to coal use, and when other disparities occurred between the information submitted by the MFBI and that developed independently by FEA. Information developed during the site visits served to either eliminate an MFBI from further consideration, through the aforementioned criteria, or served to demonstrate that FEA should continue its analysis.

For each MFBI not eliminated through any of the above criteria, FEA has calculated the net operating cost differential between using coal as the MFBI's primary energy source and using either natural gas or petroleum products.

A. *Calculation of net operating cost differential.* The net operating cost differential consists of the sum of (1) annualized increased capital investment costs required for conversion to coal, (2) differences in operating and maintenance costs (including the fuel cost differential), and (3) the potential tax consequences attendant to conversion. Initially, FEA performs two calculations in determining the net operating cost differential, one using cost figures supplied by the MFBI and the other using FEA's own estimates. When the MFBI's figures are within a reasonable range of FEA's estimates, FEA generally accepts the MFBI's figures. Gross discrepancies are examined in more detail by FEA to determine the reasonableness of the differing estimates and to reconcile differences.

The elements of the three parts of the net operating cost differential are explained below:

1. *Capital investment costs.* The primary element in this part is the cost of equipment acquisition and refurbishment required for conversion to coal, including refurbishment or acquisition of pollution control equipment. In determining the estimated annual increase fixed costs to the owner resulting from such capital investment, FEA calculates the annual depreciation of equipment costs over the expected remaining useful service life of the MFBI (including consideration of the investment tax credit) and adds the estimated annual cost of capital.

Annual depreciation is calculated as follows:

a. Determine cost of new equipment (including pollution control equipment) minus investment tax credit of 10 percent.

b. Divide the figure in a, above, by the expected remaining useful life of the MFBI after conversion is completed. FEA presumes that the MFBI's determination of remaining useful life is correct if it results in a total useful life of at least 40 years. Otherwise, FEA will conduct a more detailed examination of the MFBI.

Calculation of the approximate annual cost of capital is as follows:

a. New and refurbished equipment costs minus the investment tax credit, plus.

b. Twice the cost of land acquisitions required for conversions to coal burning.

c. The total of (1) and (2) is divided by 2 and then multiplied by a 10 percent interest rate.

2. *Operating and maintenance costs.* The primary factor considered in this calculation is the annual fuel cost differential which represents the difference between operating the MFBI with coal as its primary energy source in lieu of petroleum products or natural gas. (If the current supply of natural gas to the MFBI is curtailed, then the calculation of the fuel cost differential does not include natural gas as part of the MFBI's current fuel use to the extent of that curtailment. In such cases the NOCD was calculated on the basis of actual fuel usage). FEA has generally accepted the coal price reported by the MFBI's. If FEA considered the stated price to be unreasonable, it further examined coal prices based upon an analysis of delivered prices of coal in the area of the MFBI under consideration and an analysis of likely coal sources. Projected coal use after conversion was calculated by converting latest annual fuel use data to its BTU equivalent for coal.

Determination of the differential relating to labor costs and the differential relating to other operating and maintenance costs was based upon estimates supplied by the MFBI's.

3. *Potential tax effects.* Federal and state tax rates have been applied to the net operating cost differential to determine maximum potential tax effects resulting from a Prohibition Order.

If the NOCD for an MFBI was positive, i.e., projects an increase in annual costs of operations, then a calculation of the cost per barrel of oil saved was performed by dividing the NOCD by the number of barrels of oil actually used on an annual basis (or, if the MFBI was a natural gas user, the number of barrels of oil which would be required to replace the gas use on an equivalent BTU basis). This figure (cost per barrel of oil saved) was then considered in terms of the number of barrels of oil and/or MCF of natural gas that would be saved by issuance of a Prohibition Order, the effect of the NOCD on the MFBI owner's operating expenses, as well as various environmental and other factors in reaching the final determination as to which candidates should receive an NOI.

It is to be noted that much of the information used by FEA to make its practicability findings is arguably confidential under 18 U.S.C. 1905. Therefore, such information has not appeared in the Appendix to the NOI. The calculations have been explained in each case and the data are available to the representatives of the owner of the MFBI.

Any questions regarding this Notice should be directed to the FEA National Office as follows: Federal Energy Administration, Code OCU (Prohibition Order: ---------- Installation), Washington, D.C. 20461, (202) 566-7941.

(Energy Supply and Environmental Coordination Act of 1974 (15 U.S.C. 791 et seq.), as amended by Pub. L. 94-163; Federal Energy Administration Act of 1974 (15 U.S.C. 761 et seq.), as amended by Pub. L. 94-385; E.O. 11790 (39 FR 23185).)

Issued in Washington, D.C. May 9, 1977.

ERIC J. FYGI,
Acting General Counsel,
Federal Energy Administration.

APPENDIX A—PROPOSED FINDINGS AND RATIONALE FOR NOTICE OF INTENTION TO ISSUE A PROHIBITION ORDER

ESECA and the FEA regulations require FEA to make certain findings before issuing a Prohibition Order to a major fuel burning installation (MFBI). FEA's proposed findings are set out below with respect to the MFBI named below. Supporting rationale and conclusions are also set forth.

Docket No.	Owner	Installation	Unit No.	Location
OCU-0779	International Paper Co.	Texarkana plant	1	Texarkana, Tex.

These findings, which are now proposed by FEA, are based on the information that has been provided to and developed by FEA prior to the issuance of this Notice of Intention (NOI) to issue a Prohibition Order.

International Paper Company shall be referred to as the "owner" and as "International". The Texarkana Plant Unit 1 shall be referred to as the "MFBI" and as "Texarkana 1".

I. CAPABILITY AND NECESSARY PLANT EQUIPMENT TO BURN COAL

FEA proposes to find that on June 22, 1974, Texarkana 1 had the capability and necessary plant equipment to burn coal. This proposed finding is based on the facts and interpretations stated below:

A. International, in a Major Fuel Burning Installation Coal Conversion Report, Section II, Questions 6, and 12-14, (Form FEA C-602-S-0) filed on May 20, 1975, indicated that the MFBI had in place on June 22, 1974, a boiler that was capable of burning coal. The boiler had been designed and constructed or modified to burn coal as its primary energy source, nothwithstanding the fact that on June 22, 1974, the MFBI may not have been burning coal as its primary energy source.

B. Based on information International filed with FEA dated August 11, 1976, and other information available to FEA, the following plant equipment and facilities at Texarkana 1 would have to be acquired or refurbished in order for this MFBI to burn coal as its primary energy source:

1. Combustors; 2. Air heaters; 3. Soot blowers; 4. Special instrumentation and controls; 5. Crushers; 6. Unloaders; 7. Conveyors; 8. Pulverizers; 9. Scales; 10. Feeders; 11. Ash handling equipment.

C. FEA proposes to find that on June 22, 1974, Texarkana 1 had all other significant plant equipment and facilities associated with the burning of coal.

D. Within the meaning of ESECA and the regulations promulgated pursuant thereto, the equipment and facilities listed in paragraph B, above, do not individually or in combination constitute a lack of capability and necessary plant equipment to burn coal as of June 22, 1974.

II. THE BURNING OF COAL IN LIEU OF NATURAL GAS OR PETROLEUM PRODUCTS IS PRACTICABLE AND CONSISTENT WITH THE PURPOSES OF ESECA

FEA proposes to find that the burning of coal in lieu of petroleum products or natural gas at Texarkana 1 is practicable and consistent with the purposes of ESECA. This proposed finding is based upon an analysis by FEA of the fuel consumption of this boiler for the period 1973-1975, the remaining useful service life of the boiler after conversion, the net operating cost differential that would result from compliance with a Prohibition Order, as well as the facts and interpretations referenced below:

A. *The burning of coal is practicable.*—1. *Anticipated fuel supplies.*

Curtailment of natural gas supply. Based on information obtained from the Federal Power Commission, the natural gas supplier, and in certain cases the owner, FEA presumes that the MFBI will experience a substantial curtailment of its present supply of natural gas. This curtailment will result in increased reliance on alternate fuels in the future.

2. *Costs associated with burning coal.*—a. *Capital investment costs.* The total estimated initial capital investment costs, including financing costs, that would result from the acquisition and refurbishment of equipment and facilities associated with the burning of coal at Texarkana 1 have been determined.

This determination was based on existing FEA information and analysis as well as information filed with FEA by the owner. Approximate costs to comply with applicable environmental protection requirements have also been considered, including the cost of compliance with the air pollution control requirements of the Clean Air Act.

b. *Annual operating and maintenance costs.* The expected increase in operating and maintenance costs, exclusive of fuel costs, that would result from the burning of coal has been calculated based on information supplied by the owner or otherwise acquired by FEA.

c. *Fuel costs.* Based on an analysis of annual fuel consumption and fuel cost information supplied by the owner and/or, in appropriate circumstances, upon FEA's fuel cost estimates, FEA has determined that the burning of coal in lieu of natural gas or petroleum products at Texarkana 1 will result in an increase in annual fuel costs.

d. *Net operating cost differential.* Based on the factors stated in paragraphs A.1.a.-c., above, as well as the expected remaining useful life of the boiler after conversion, FEA has determined that the net annual operating cost differential hereafter "NOCD", (which represents the difference between operating the boiler with coal and alternate fuel(s) as its primary energy source), resulting from the conversion of Texarkana 1, will represent an annual cost increase of $1,005,837.

3. *Reasonableness of additional costs of burning coal.* The following analysis of the costs of conversion provides the basis for deciding that compliance with the proposed order is not unreasonable. By converting from burning natural gas to burning coal as the primary energy source the MFBI would experience a net annual operating cost increase, but would save a substantial amount of natural gas. This cost would only be incurred for a limited period because the MFBI will eventually experience a substantial curtailment of its supply of natural gas. If the prohibition order were not issued to the MFBI it could alternately replace its current natural gas supply with either petroleum products or coal for the period following such subetantial curtailment of its natural gas supply.

In the calculation of the NOCD, FEA has considered oil as a substitute fuel for curtailed natural gas. In calculating the NOCD, in those instances where the MFBI has experienced no curtailment of its natural gas supply, FEA considered the present fuel usage. The net annual operating cost increase for this MFBI resulting from operating on coal as the primary energy source, instead of petroleum products (and/or natural gas where applicable), will be approximately $1,005,837

Although the use of the coal alternative, instead of potential petroleum products, could be expected to result in a net annual operating cost increase, FEA has determined that the prohibition of burning natural gas or petroleum products as the primary energy source at Texarkana is not unreasonable.

Burning of coal by Texarkana 1 as its primary energy source instead of petroleum products would result in additional capital investment costs and annual operating and maintenance costs exclusive of fuel costs. Any additional conversion costs would, however, be mitigated by the savings in fuel costs inherent in burning coal. Notwithstanding the fact that the MFBI could experience annual savings in its total fuel costs should it convert to coal instead of converting to petroleum products, there would be a net increase in the costs to the MFBI.

Although conversion to the burning of coal instead of petroleum products would be expected to increase the costs incurred by Texarkana 1 by $1,006,837 per year, FEA proposes to find that such increased cost, per barrel of oil saved is not unreasonable given the purposes of ESECA. This determination is based on consideration of the substantial potential oil savings that would result from conversion to coal. The determination that the costs of burning coal instead of petroleum products would not be unreasonable is further supported by consideration of such costs in relation to the expected remaining useful life of the MFBI, the size and resources of the owner as examined in the following discussion of financial capability, and the nature of the expected operations of the MFBI.

The additional costs that would be incurred if FEA were to prohibit the burning of natural gas or petroleum products as the primary energy source at Texarkana 1 would only be incurred for a limited period of time. In view of the scarcity of national supplies of natural gas and the likelihood that Texarkana 1 will experience a substantial curtailment of its present natural gas supply in the future, FEA has determined that the cost of burning coal in lieu of natural gas is not unreasonable. (*Final Report Oil and Gas Resources, Reserves, and Productive Capacities Volumes I and II*, Federal Energy Administration, October 1975.)

4. *Financial capability of the owner.*—a. *Recovery of capital investment.* FEA proposes to find that compliance with a Prohibition Order by Texarkana 1 would be economically feasible. FEA's analysis took into consideration the financial capability of the owner and is based upon the owner's financial position

as reported in the *Dun and Bradstreet Reference Book* (March 1977). Where necessary, FEA performed an independent analysis of the owner's financial capability, considering such factors as the owner's current financial statement and the additional capital investment required for the owner to comply with this NOI and all other NOI's which are currently under consideration, as well as additional capital investment costs related to all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2 (a) and (c) of ESECA to MFBI's owned by International. FEA related these additional capital investment costs to the total capitalization of International and the remaining useful life after conversion of Texarkana 1.

FEA does not consider the effect of the added capital investment costs to represent an unreasonable burden given the financial capabilities of International to assume such costs.

b. *Total annual costs associated with conversion.* The total estimated annual increase in costs (amortized increased capital investment costs and other costs, exclusive of fuel costs) associated with the burning of coal as opposed to oil and natural gas attributable to compliance with this NOI and all other NOI's which are currently under consideration has been determined. FEA also took into consideration total annual costs resulting from compliance with all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2 (a) and (c) of ESECA to International MFBI's.

Notwithstanding the potential offsetting aggregate value of fuel cost savings, attributable to compliance with this NOI and all other NOI's currently under consideration, International's total annual costs after conversion will increase by $738,345.

B. *Consistency with the purposes of ESECA.* Because the issuance of a Prohibition Order to Texarkana 1 will discourage the use of natural gas or petroleum products and encourage the increased use of coal, FEA proposes to conclude that this action would be consistent with the purpose of ESECA to provide a means to assist in meeting the essential needs of the United States for fuels.

On the basis of the environmental analysis which FEA is required to conduct prior to issuance of a Notice of Effectiveness of a Prohibition Order, as well as the necessity for this MFBI to comply with the Clean Air Act and other applicable environmental protection requirements, FEA proposes to conclude that a Prohibition Order to Texarkana 1 would be consistent with the purpose of ESECA to provide for a means to assist in meeting the essential needs of the United States for fuels in a manner which is consistent, to the fullest extent practicable, with existing national commitments to protect and improve the environment.

III. COAL AND COAL TRANSPORTATION FACILITIES WILL BE AVAILABLE TO THIS MFBI DURING THE PERIOD UNTIL DECEMBER 31, 1984

A. *Coal availability.* 1. *National coal reserves.* United States coal reserves are more than sufficient to supply national needs for the foreseeable future. U.S. Department of the Interior, Bureau of Mines (BOM) data show a demonstrated coal reserve base of over 400 billion tons, over half of which is currently technically and economically recoverable (Demonstrated Coal Reserve Base of the United States by Sulfur Category, on January 1, 1974, Bureau of Mines (May 1975) (hereafter "BOM Survey")). Within these recoverable reserves approximately 200 billion tons contain 1 percent or less sulfur by weight. To determine when certain quantities of these reserves are expected to be available, FEA has examined several studies referenced herein, which together provide the best current evidence as to coal availability for the period ending December 31, 1984.

2. *National coal production and demand.* The comparison, stated below, of estimated national coal production, national coal demand, and the total tonnage of uncommitted planned national coal production (derived from responses to a survey of coal producing companies) shows that there should be sufficient production of coal to meet the total national demand through 1980. Beyond 1980, plans for new production are not yet fully developed because few coal producers have firm expansion plans that extend that far into the future; however, the projected total planned national coal production for 1985 already meets 99 percent of the total U.S. demand expected in 1985. With time, more potential mine developments will become firm plans, thus increasing the planned production.

a. *National coal production.* It is conservatively estimated that it will be practicable to produce coal nationally in at least the following quantities:

Year:	Production potential (million tons)
1977	732.3
1978	791.6
1979	851.4
1980	911.7
1981	960.0
1982	994.3
1983	1,017.4
1984	1,028.7
1985	1,029.6

The figures shown above are derived from FEA's Coal Mine Expansion Study (May 1976). This study demonstrates that most coal producers did not have firm or accurate plans for new capacity additions beyond 1980. The 1985 projection, therefore, tends to underestimate actual production potential.

An FEA study, Coal Availability Report, April 1977, (hereafter "Availability Report"), indicates current plans for nationwide production of uncommitted coal as follows:

Year:	Production (million tons)
1978	124.3
1979	243.1
1980	293.3
1981	350.0
1982	369.9
1983	396.2
1984	475.5
1985	544.9

b. *National demand exclusive of ESECA prohibition order demand.* The estimated national demand, excluding any increased demand resulting from FEA action under the authority of Section 2(a) of ESECA, is as follows (FEA 1976 National Energy Outlook):

Year:	Demand (million tons)
1978	730
1979	764
1980	799
1981	842
1982	887
1983	935
1984	985
1985	1,040

c. *National ESECA prohibition order demand.* The estimated potential demand for coal resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA is no more than the following ("Availability Report"):

Year:	Demand (million tons)
1978	11.0
1979	22.4
1980	32.5
1981	35.8
1982	57.4
1983	59.8
1984	59.8

3. *Characteristic coal production and demand.* FEA's "Availability Report" indentifies coal of specific quality characteristics available for use at this MFBI. The survey is based on data from 31 mining companies that supplied useful information on 96 mining units. Responses from these companies identified planned production of coal which is not now committed to a specific buyer. For those companies which did not respond to the survey, FEA estimated their uncommitted planned production based on their 1974 production.

a. *Characteristic coal requirements for this MFBI.* FEA's "Availability Report" has determined that a boiler of the type used at Texarkana 1 will be able to burn coal of the following characteristics and comply with all applicable air pollution control requirements.

Btu's/lb	[1] 10,000
Moisture (percent)	[2] 15
Ash (percent)	[2] 20
Volatile (percent)	[1] 15
Ash softening temp. (°F)	[1] 2,200
Sulfur (approximately)	[2] 0.7

[1] Minimum.
[2] Maximum.

b. *Characteristic coal demand from this MFBI.* The potential demand for coal, of the type described above, which would result from this NOI is estimated to be as follows:

Year:	Demand (thousand tons)
1980 and thereafter	151

c. *National planned production, characteristic coal.* FEA's "Availability Report" has determined that coal of the type described in paragraph A.3.a., above, is uncommitted to a specific buyer and will be potentially available to this MFBI in a nationwide market as follows:

Year:	Production (thousand tons)
1978	54,090
1979	97,325
1980	124,328
1981	149,252
1982	158,268
1983	170,320
1984	201,207

d. *National ESECA prohibition order demand for coal, regardless of characteristics.* The national planned production of characteristic coal, as stated in paragraph A.3.c., above, exceeds potential demand for coal regardless of characteristic expected from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. National ESECA Prohibition Order demand as previously stated in paragraph A.2.c., above, is no more than the following ("Availability Report"):

Year:	Demand (thousand tons)
1978	11,032
1979	22,434
1980	32,483
1981	35,755

1982	57,362
1983	59,815
1984	59,815

e. *Regional planned production, characteristic coal.* Coal with the characteristics described in paragraph A.3.a., above, is uncommitted and will be potentially available to the MFBI (in a probable regional supply/demand relationship related to the location of the MFBI) from BOM Districts 7, 8 and 13 as follows ("Availability Report"):

Year:	Production (thousand tons)
1978	19,952
1979	33,160
1980	37,779
1981	44,246
1982	47,145
1983	51,293
1984	58,891

f. *Regional ESECA prohibition order demand for coal, regardless of characteristic.* The expected regional production of characteristic coal, as stated in paragraph A.3.e., above, exceeds the potential demand for coal regardless of characteristic from BOM Districts 7, 8 and 13 expected to result from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. This potential regional demand is estimated in FEA's "Availability Report" to be no more than the following:

Year:	Demand (thousand tons)
1978	3,268
1979	9,149
1980	16,321
1981	18,005
1982	23,682
1983	24,095
1984	24,095

g. *Regional ESECA prohibition order demand for coal by sulfur characteristic.* The potential regional demand for coal from BOM Districts 7, 8, and 13 with a 0.61–1.0 percent sulfur content (which includes the 0.7 percent maximum sulfur content described in paragraph A.3.a., above) resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under the authority of Section 2(a) of ESECA is estimated in FEA's "Availability Report" to be no more than the following:

Year:	Demand (thousand tons), Percent sulfur 1.61–1.0
1978	2,831
1979	5,578
1980	9,839
1981	11,028
1982	16,292
1983	16,292
1984	16,292

The regional planned production of coal stated in paragraph A.3.e., above, with the characteristics described in paragraph A.3.a., above, far exceeds this potential ESECA regional demand for coal by sulfur characteristic.

4. *State or local laws.* FEA has found no state or local laws or policies limiting the extraction or utilization of coal that would adversely affect these production figures, and none have been brought to FEA's attention.

5. *Conclusion.* FEA's "Availability Report" has identified nationally and in BOM Districts 7, 8 and 13 uncommitted coal production that meets the requirements of Texarkana 1 as described in paragraph A.3.a., above. FEA proposes to find that this uncommitted coal exists in amounts sufficient in any year to meet the estimated additional demand for coal, both nationally and from these Districts, resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA.

Coal for this MFBI will probably be bought from producers according to regional supply/demand relationships related to the MFBI's location from BOM Districts 7, 8 and 13. FEA observes, however, that the MFBI could purchase coal in other markets as such production becomes available. (The Feasibility of Considering Expanded Use of Western Coal by Midwestern and Eastern Utilities in the Period 1978 and Beyond, School of Engineering, University of Pennsylvania, November 7, 1975.)

B. *Coal transportation.* 1. *Location of MFBI and coal supply.* Based on an FEA study, Coal Transportation Availability Report, April 1977, (hereafter "Transportation Availability Report"), coal for Texarkana 1 would probably come from BOM District 8 as the primary supply area and from BOM District 17 as the alternate supply area. While these supply regions are among the nearest available sources able to supply complying coal to the plant, complying coal could be tranferred by rail from other identified sources within the United States as well. The analysis of transportation availability is based on the most likely route as well as two alternate routes. These routes were chosen to demonstrate transportation availability.

2. *Route of coal shipment.* The primary route for coal delivery for Texarkana 1 is to originate coal in BOM District 8 near Hazard, Kentucky on the Louisville and Nashville (L&N) Railroad. The L&N would move it via Louisville, Kentucky to Memphis, Tennessee where the St. Louis Southwestern (SSW) picks it up for delivery to Texarkana 1. The total rail distance is about 900 miles.

The alternate route for coal delivery from the primary supply area would originate in BOM District 8 on the Kanawha River, West Virginia. Barges of the Ohio River Company or the Crounse Corporation would carry it via the Ohio and Mississippi Rivers to coal docks at Memphis, Tennessee where the Chicago, Rock Island and Pacific (CRIP) would reload the coal and move it to Little Rock, Arkansas where the Missouri Pacific (MP) would pick it up to deliver to Texarkana 1. The total rail distance is about 280 miles with a water leg of about 980 miles.

An alternate route for coal delivery from the alternate supply area would originate in BOM District 17 in the Grand Junction, Colorado area. The Denver and Rio Grande Western (D&RGW) would carry it to Pueblo, Colorado. The Atcheson, Topeka and Santa Fe (ATSF) will then take the coal via Boise City, Oklahoma, to Amarillo, Texas where the Fort Worth and Denver would then take the coal to Fort Worth, Texas. The St. Louis and Southwestern would pick up the coal for delivery to Texarkana 1. The total rail distance is about 1210 miles.

3. *Originating trunk carrier.* The L&N, the originating carrier of coal for Texarkana 1 has about 34,000 hopper cars in service and has been increasing this number by about 2,000 cars per year. Using an average number of 20 deliveries per year per 75-ton car, the L&N may need as many as 117 additional cars to handle the increased demand from Texarkana 1. This estimate assumes that the railroad would neither have excess originating capacity nor obtain cars from other carriers in the originating vicinity.

FEA's "Transportation Availability Report" concluded that for all potential Prohibition Order candidates studied, there would be no major contraints in transporting coal. This study examined existing rail transportation car capacity, water transportation capacity including unloading docks, where applicable, and took into account projections made by all carriers to meet the anticipated demand for all types of transportation facilities assuming all MFBI's studied were to receive orders under Section 2(a) of ESECA.

The L&N indicated that transportation facilities at those mine sites within BOM District 8 served by the L&N are in good condition and that loading facilities could handle the required coal volumes.

FEA has not found nor has it been informed of any apparent constraints to carrying coal for any originating alternate or intermediate carriers should they be used.

4. *Destination carrier and plant facilities.* The SSW and MP both provide freight service to Texarkana, Texas. Texarkana 1 has indicated that coal unloading and handling facilities would need to be installed. It is expected that these installations can be accomplished prior to the effective date for coal burning.

There are no other obstacles to the delivery of coal to Texarkana 1.

5. *Conclusion.* Coal transportation facilities will be available for the period a Prohibition Order is expected to be in effect since no major constraints to coal delivery over the primary route to Texarkana 1 presently exist, and alternate routes are available.

APPENDIX B—PROPOSED FINDINGS AND RATIONALE FOR NOTICE OF INTENTION TO ISSUE A PROHIBITION ORDER

ESECA and the FEA regulations require FEA to make certain findings before issuing a Prohibition Order to a major fuel burning installation (MFBI). FEA's proposed findings are set out below with respect to the MFBI's named below. Supporting rationale and conclusions are also set forth.

Docket No.	Owner	Installation	Unit No.	Location
OCU-0786	International Paper Co.	Pine Bluff plant	1,2	Pine Bluff, Ark.

These findings, which are now proposed by FEA, are based on the information that has been provided to and developed by FEA prior to the issuance of this Notice of Intention (NOI) to issue a Prohibition Order.

International Paper Company shall be referred to as the "owner" and as "International". Pine Bluff Plant Units 1 and 2 shall be referred to as the "MFBI's" and as "Pine Bluff 1 and 2".

I. CAPABILITY AND NECESSARY PLANT EQUIPMENT TO BURN COAL

FEA proposes to find that on June 23, 1974, Pine Bluff 1 and 2 had the capability and necessary plant equipment to burn coal. This proposed finding is based on the facts and interpretations stated below:

A. International, in a Major Fuel Burning Installation Coal Conversion Report, Section

II, Questions 6, and 12–14, (Form FEA C–602–S–0), filed on May 20, 1975, indicated that each MFBI had in place on June 22, 1974, a boiler that was capable of burning coal. The boilers had been designed and constructed or modified to burn coal as their primary energy source, notwithstanding the fact that on June 22, 1974, the MFBI's may not have been burning coal as their primary energy source.

B. Based on information International filed with FEA dated August 11, 1976, and other information available to FEA, the following plant equipment and facilities at Pine Bluff 1 and 2 would have to be acquired or refurbished in order for these MFBI's to burn coal as their primary energy source:

1. Unloaders; 2. Conveyors; 3. Crushers; 4. Scales; 5. Feeders; 6. Air heaters; 7. Combustors; 8. Soot blowers; 9. Controls; 10. Ash handling and ponding.

C. FEA proposes to find that on June 22, 1974, Pine Bluff 1 and 2 had all other significant plant equipment and facilities associated with the burning of coal.

D. Within the meaning of ESECA and the regulations promulgated pursuant thereto, the equipment and facilities listed in paragraph B, above, do not individually or in combination constitute a lack of capability and necessary plant equipment to burn coal as of June 22, 1974.

II. THE BURNING OF COAL IN LIEU OF NATURAL GAS OR PETROLEUM PRODUCTS IS PRACTICABLE AND CONSISTENT WITH THE PURPOSES OF ESECA

FEA proposes to find that the burning of coal in lieu of petroleum products or natural gas at Pine Bluff 1 and 2 is practicable and consistent with the purposes of ESECA. This proposed finding is based upon an analysis by FEA of the fuel consumption of these boilers for the year 1975, the remaining useful service life of each boiler after conversion, the net operating cost differential that would result from compliance with a Prohibition Order, as well as the facts and interpretations referenced below:

A. *The burning of coal is practicable.*—1. *Anticipated fuel supplies.*

Curtailment of natural gas supply. Based on information obtained from the Federal Power Commission, the natural gas supplier, and in certain cases the owner, FEA presumes that these MFBI's will experience a substantial curtailment of their present supply of natural gas. This curtailment will result in increased reliance on alternate fuels in the future.

2. *Costs associated with burning coal.*—a. *Capital investment costs.* The total estimated initial capital investment costs, including financing costs, that would result from the acquisition and refurbishment of equipment and facilities associated with the burning of coal at Pine Bluff 1 and 2 have been determined.

This determination was based on existing FEA information and analysis as well as information filed with FEA by the owner. Approximate costs to comply with applicable environmental protection requirements have also been considered, including the cost of compliance with the air pollution control requirements of the Clean Air Act.

b. *Annual operating and maintenance costs.* The expected increase in operating and maintenance costs, exclusive of fuel costs, that would result from the burning of coal has been calculated based on information supplied by the owner or otherwise acquired by FEA.

c. *Fuel costs.* Based on an analysis of annual fuel consumption and fuel cost information supplied by the owner/or, in appropriate circumstances, upon FEA's fuel cost estimates, FEA has determined that the burning of coal in lieu of natural gas or petroleum products at Pine Bluff 1 and 2 will result in a decrease in annual fuel costs.

d. *Net operating cost differential.* Based on the factors stated in paragraphs A.1.a.–c., above, as well as the expected remaining useful life of the boilers after conversion, FEA has determined that the net annual operating cost differential, hereafter "NOCD", (which represents the difference between operating the boilers with coal and alternate fuel(s) as their primary energy source), resulting from the conversion of Pine Bluff 1 and 2 will represent an annual savings.

3. *Reasonableness of additional costs of burning coal.* The following analysis of the costs of conversion provides the basis for deciding that compliance with the proposed order is not unreasonable.

By converting from burning natural gas to burning coal as the primary energy source these MFBI's would experience a net annual operating cost increase, but would save a substantial amount of natural gas. This cost would only be incurred for a limited period because these MFBI's will eventually experience a substantial curtailment of their supply of natural gas. If the prohibition order were not issued to these MFBI's they could alternately replace their current natural gas supply with either petroleum products or coal for the period following such substantial curtailment of their natural gas supply.

In the calculation of the NOCD, FEA has considered oil as a substitute fuel for curtailed natural gas. In calculating the NOCD, in those instances where the MFBI has experienced no curtailment of its natural gas supply, FEA considered the present fuel usage. The net annual operating cost differential for these MFBI's resulting from operating on coal as their primary energy source, instead of petroleum products (and/or natural gas where applicable), will represent an annual savings.

Since the use of the coal alternative, instead of petroleum products, could be expected to result in a net cost savings, FEA has determined that the prohibition against burning natural gas or petroleum products as the primary energy source at these MFBI's is not unreasonable.

The additional costs that would be incurred from prohibiting the burning of natural gas as the primary energy source at these MFBI's would only be incurred for a limited period of time. In view of the scarcity of national supplies of natural gas and the likelihood that Pine Bluff 1 and 2 will experience a substantial curtailment of their present supply of natural gas in the future, FEA has determined that the cost of burning coal in lieu of natural gas is not unreasonable. (*Final Revort Oil and Gas Resources, Reserves, and Productive Capacities Volumes I and II*, Federal Energy Administration, October 1975.) This determination is further supported by consideration of the savings that would result from the burning of coal in lieu of potential alternate petroleum products for the period after which the natural gas supply to Pine Bluff 1 and 2 would be substantially curtailed.

4. *Financial capability of the owner.*—a. *Recovery of capital investment.* FEA proposes to find that compliance with a Prohibition Order by Pine Bluff 1 and 2 would be economically feasible. FEA's analysis took into consideration the financial capability of the owner and is based upon the owner's financial position as reported in the Dun and Bradstreet Reference Book (March 1977). Where necessary, FEA performed an independent analysis of the owner's financial capability, considering such factors as the owner's current financial statement and the additional capital investment required for the owner to comply with this NOI and all other NOI's which are currently under consideration, as well as additional capital investment costs related to all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2 (a) and (c) of ESECA to MFBI's owned by International. FEA related these additional capital investment costs to the total capitalization of International and the remaining useful life after conversion of Pine Bluff 1 and 2.

FEA does not consider the effect of the added capital investment costs to represent an unreasonable burden given the financial capabilities of International to assume such costs.

b. *Total annual costs associated with conversion.* The total estimated annual increase in costs (amortized increased capital investment costs and other costs, exclusive of fuel costs) associated with the burning of coal as opposed to oil attributable to compliance with this NOI and all other NOI's which are currently under consideration has been determined. FEA also took into consideration total annual costs resulting from compliance with all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2 (a) and (c) of ESECA to International MFBI's.

Notwithstanding the potential offsetting aggregate value of fuel cost savings attributable to compliance with this NOI and all other NOI's currently under consideration, International's total annual costs after conversion should increase by $738,345.

B. *Consistency with the purpoées of ESECA.* Because the issuance of a Prohibition Order to Pine Bluff 1 and 2 will discourage the use of natural gas or petroleum products and encourage the increased use of coal, FEA proposes to conclude that this action would be consistent with the purpose of ESECA to provide a means to assist in meeting the essential needs of the United States for fuels.

On the basis of the environmental analysis which FEA is required to conduct prior to issuance of a Notice of Effectiveness of a Prohibition Order, as well as the necessity for this MFBI to comply with the Clean Air Act and other applicable environmental protection requirements, FEA proposes to conclude that a Prohibition Order to Pine Bluff 1 and 2 would be consistent with the purpose of ESECA to provide for a means to assist in meeting the essential needs of the United States for fuels in a manner which is consistent, to the fullest extent practicable, with existing national commitments to protect and improve the environment.

III. COAL AND COAL TRANSPORTATION FACILITIES WILL BE AVAILABLE TO THESE MFBI'S DURING THE PERIOD UNTIL DECEMBER 31, 1984.

A. *Coal availability.*—1. *National coal reserves.* United States coal reserves are more than sufficient to supply national needs for the foreseeable future. U.S. Department of the Interior, Bureau of Mines (BOM) data show a demonstrated coal reserve base of over 400 billion tons, over half of which is currently technically and economically recoverable. (Demonstrated Coal Reserve Base of the United States, by Sulfur Category, on January 1, 1974, Bureau of Mines (May 1975) [hereafter "BOM Survey"]). Within these

recoverable reserves approximately 200 billion tons contain 1 percent or less sulfur by weight. To determine when certain quantities of these reserves are expected to be available, FEA has examined several studies referenced herein, which together provide the best current evidence as to coal availability for the period ending December 31, 1984.

2. *National coal production and demand.* The comparison, stated below, of estimated national coal production, national coal demand, and the total tonnage of uncommitted planned national coal production (derived from responses to a survey of coal producing companies) shows that there should be sufficient production of coal to meet the total national demand through 1980. Beyond 1980, plans for new production are not yet fully developed because few coal producers have firm expansion plans that extend that far into the future; however, the projected total planned national coal production for 1985 already meets 99 percent of the total U.S. demand expected in 1985. With time, more potential mine developments will become firm plans, thus increasing the planned production.

a. *National coal production.* It is conservatively estimated that it will be practicable to produce coal nationally in at least the following quantities:

Year:	*Production potential (million tons)*
1977	723.3
1978	791.6
1979	851.4
1980	911.7
1981	960.0
1982	994.1
1983	1,017.4
1984	1,028.7
1985	1,029.6

The figures shown above are derived from FEA's Coal Mine Expansion Study (May 1976). This study demonstrates that most coal producers did not have firm or accurate plans for new capacity additions beyond 1980. The 1985 projection, therefore, tends to underestimate actual production potential.

An FEA study, *Coal Availability Report*, April 1977, (hereafter "Availability Report"), indicates current plans for nationwide production of uncommitted coal as follows:

Year:	*Production (million tons)*
1978	124.8
1979	243.1
1980	393.6
1981	550.0
1982	369.9
1983	396.2
1984	475.5
1985	544.9

b. *National demand exclusive of ESECA prohibition order demand.* The estimated national demand, excluding any increased demand resulting from FEA action under the authority of Section 2(a) of ESECA, is as follows (FEA 1976 National Energy Outlook):

Year:	*Demand (million tons)*
1978	780
1979	704
1980	799
1981	842
1982	887
1983	935
1984	985
1985	1,040

c. *National ESECA prohibition order demand.* The estimated potential demand for coal resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA is no more than the following ("Availability Report"):

Year:	*Demand (million tons)*
1978	11.0
1979	22.4
1980	32.5
1981	35.8
1982	57.4
1983	59.8
1984	59.8

3. *Characteristic coal production and demand.* FEA's "Availability Report" identifies coal of specific quality characteristics available for use at these MFBI's. The survey is based on data from 31 mining companies that supplied useful information on 96 mining units. Responses from these companies identified planned production of coal which is not now committed to a specific buyer. For those companies which did not respond to the survey, FEA estimated their uncommitted planned production based on their 1974 production.

a. *Characteristic coal requirements for these MFBI's.* FEA's "Availability Report" has determined that boilers, of the type used at Pine Bluff 1 and 2 will be able to burn coal of the following characteristics and comply with all applicable air pollution control requirements.

Btu's/lb.	[1] 10,000
Moisture (percent)	[2] 15
Ash (percent)	[2] 20
Volatile (percent)	[1] 15
Ash softening temperature (°F)	[2] 2,375
Sulfur (percent)	[2] 0.7

[1] Mimimum.
[2] Maximum.

b. *Characteristic coal demand from this MFBI.* The potential demand for coal, of the type described above, which would result from this NOI is estimated to be as follows:

Year:	*Demand (thousand tons)*
1979 and thereafter	303

c. *National planned production, characteristic coal.* FEA's "Availability Report" has determined that coal of the type described in paragraph A.3.a., above, is uncommitted to a specific buyer and will be potentially available to these MFBI's in a nationwide market as follows:

Year:	*Production (thousand tons)*
1978	54,090
1979	97,325
1980	124,328
1981	149,252
1982	158,268
1983	170,320
1984	201,207

d. *National ESECA prohibition order demand for coal, regardless of characteristics.* The national planned production of characteristic coal, as stated in paragraph A.3.c., above, exceeds potential demand for coal regardless of characteristics expected from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. National ESECA Prohibition Order demand as previously stated in paragraph A.2.c., above, is no more than the following ("Availability Report"):

Year:	*Demand (thousand tons)*
1978	11,032
1979	22,494
1980	32,483
1981	35,755
1982	57,362
1983	59,815
1984	59,815

e. *Regional planned production, characteristic coal.* Coal with the characteristics described in paragraph A.3.a., above, is uncommitted and will be potentially available to these MFBI's (in a probable regional supply/demand relationship related to the location of these MFBI's) from BOM Districts 7, 8 and 13 as follows ("Availability Report"):

Year:	*Production (thousand tons)*
1978	19,952
1979	33,160
1980	37,779
1981	44,246
1982	47,145
1983	51,293
1984	53,891

f. *Regional ESECA prohibition order demand for coal, regardless of characteristic.* The expected regional production of characteristic coal, as stated in paragraph A.3.e., above, exceeds the potential demand for coal regardless of characteristic from BOM Districts 7, 8 and 13 expected to result from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. This potential regional demand is estimated in FEA's "Availability Report" to be no more than the following:

Year:	*Demand (thousand tons)*
1978	3,268
1979	9,149
1980	16,321
1981	18,005
1982	23,682
1983	24,095
1984	24,095

g. *Regional ESECA prohibition order demand for coal by sulfur characteristic.* The potential regional demand for coal from BOM Districts 7, 8, and 13 with a 0.61–1.0 percent sulfur content (which includes the 0.7 percent maximum sulfur content described in paragraph A.3.a., above) resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under the authority of Section 2(a) of ESECA is estimated in FEA's "Availability Report" to be no more than the following:

Year:	*Demand (thousand tons) percent sulfur 0.61 to 1.0*
1978	2,831
1979	5,578
1980	9,834
1981	11,028
1982	16,292
1983	16,292
1984	16,292

The regional planned production of coal stated in paragraph A.3.e., above, with the characteristics described in paragraph A.3.a., above, far exceeds this potential ESECA regional demand for coal by sulfur characteristic.

4. *State or local laws.* FEA has found no state or local laws or policies limiting the extraction or utilization of coal that would adversely affect these production figures, and none have been brought to FEA's attention.

5. *Conclusion.* FEA's "Availability Report" has identified nationally and in BOM Districts 7, 8 and 13 uncommitted coal production that meets the requirements of Pine

Bluff 1 and 2 as described in paragraph A.3.a., above. FEA proposes to find that this uncommitted coal exists in amounts sufficient in any year to meet the estimated additional demand for coal, both nationally and from these Districts, resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA.

Coal for these MFBI's will probably be bought from producers according to regional supply/demand relationships related to the MFBI's location from BOM Districts 7, 8 and 13. FEA observes, however, that these MFBI's could purchase coal in other markets as such production becomes available. (The Feasibility of Considering Expanded Use of Western Coal by Midwestern and Eastern Utilities in the Period 1978 and Beyond, School of Engineering, University of Pennsylvania, November 7, 1976.)

B. *Coal transportation.*—1. *Location of MFBI's and coal supply.* Based on an FEA study, Coal Transportation Availability Report, April 1977, (hereafter "Transportation Availability Report"), coal for Pine Bluff 1 and 2 would probably come from BOM District 8 as the primary supply area and from BOM District 13 as the alternate supply area. While these supply regions are among the nearest available sources able to supply complying coal to these plants, complying coal could be transferred by rail from other identified sources within the United States as well. The analysis of transportation availability is based on the most likely route as well as two alternate routes. These routes were chosen to demonstrate transportation availability.

2. *Route of coal shipment.* The primary route for coal delivery for Pine Bluff 1 and 2 would originate in BOM District 8 in the Hazard, Kentucky, area on the Louisville and Nashville (L&N) Railroad. The L&N would move the coal via Louisville, Kentucky to Memphis, Tennessee, where the St. Louis Southwestern (SLSW) would then deliver the coal to Pine Bluff 1 and 2. The total rail distance is about 750 miles.

An alternate route for coal delivery from the primary supply area originates in BOM District 8 near Clinton, Tennessee, on the Southern Railway (Southern) which moves the coal via Chattanooga to Memphis, Tennessee, where the SLSW would then deliver the coal to Pine Bluff 1 and 2. The total rail distance is about 560 miles.

An alternate route from the alternate supply area would originate coal in BOM District 13 in the Birmingham, Alabama area on the Southern Railway. Southern would carry the coal to meridian, Mississippi where the Illinois Central Gulf would then haul the coal via Vicksburg, Mississippi, to Tallulah, Louisiana. Missouri Pacific would then carry the coal for delivery to Pine Bluff 1 and 2. The total rail distance about 460 miles.

3. *Originating trunk carrier.* The L&N, the originating carrier of coal for Pine Bluff 1 and 2 has over 34,000 hopper cars in service and has been increasing this number by about 2,000 cars per year. Using an average number of 20 deliveries per year per 75-ton car, the L&N may need as many as 223 additional cars to handle the increased demand from Pine Bluff 1 and 2. This estimate assumes that the railroad would neither have excess originating capacity nor obtain cars from other carriers in the originating vicinity.

FEA's "Transportation Availability Report" concluded that for all potential Prohibition Order candidates studied, there would be no major constraints in transporting coal. This study examined existing rail transportation car capacity, water transportation capacity, including unloading docks, where applicable, and took into account projections made by all carriers to meet the anticipated demand for all types of transportation facilities assuming all MFBI's studied were to receive orders under Section 2(a) of ESECA.

The L&N indicated that transportation facilities at those mine sites within BOM District 8 served by the L&N are in good condition and that loading facilities could handle the required coal volumes.

FEA has not found nor has it been informed of any apparent constraints to carrying coal for any alternate or intermediate carriers should they be used.

4. *Destination carrier and MFBI facilities.* Heavy rail freight service is provided to plants in the Pine Bluff, Arkansas area by both the St. Louis Southwestern and the Missouri Pacific Railroads. Pine Bluff 1 and 2 has reported that coal unloading and handling equipment and facilities would need to be installed. It is expected that these installations can be accomplished prior to the effective date for coal burning.

There are no other obstacles to the delivery of coal to Pine Bluff 1 and 2.

5. *Conclusion.* Coal transportation facilities will be available for the period a Prohibition Order is expected to be in effect since no major constraints to coal delivery over the primary route to Pine Bluff 1 and 2 presently exist, and alternate routes are available.

[FR Doc.77-13697 Filed 5-12-77;8:45 am]

ENERGY SUPPLY AND ENVIRONMENTAL COORDINATION ACT

Intention To Issue Prohibition Orders to Certain Installations; Kennecott Copper Corp.

The Federal Energy Administration (FEA) hereby gives notice of its intention to issue Prohibition Orders, pursuant to the authorities granted it by Section 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974, as amended (ESECA), and Title 10, Code of Federal Regulations (10 CFR), Parts 303 and 305 to the following installations:

Docket No.	Owner	Installation	Unit No.	Location
OCU-2979	Kennecott Copper Corp.....	Utah Copper division.....	1, 2, 3, 4	Salt Lake City, Utah.

FEA hereby also gives notice of the opportunity for oral and written presentation of data, views, and arguments by interested persons regarding these proposed Prohibition Orders.

The proposed orders would prohibit the above-named installations from burning natural gas or petroleum products as their primary energy source.

Prior to issuance of a Prohibition Order to an installation, Section 2(a) of ESECA and 10 CFR 303.36(b) and 305.4 (b) require that FEA find that the installation had the capability and necessary plant equipment to burn coal as of June 22, 1974. A Prohibition Order may not be issued unless FEA can find that the prohibition of the utilization of natural gas or petroleum products as a primary energy source is practicable and consistent with the purposes of ESECA and that coal and coal transportation facilities will be available during the period the Prohibition Order will be in effect. FEA's proposed findings, as well as its proposed conclusions and rationale with respect to these findings, for each installation are set out in the Appendix to this notice. These findings, conclusions and rationale may be amended as a result of comments received by FEA pursuant to this notice and other information available to FEA. The findings, conclusions and rationale will be included, with any amendments, for each Prohibition Order that is issued.

Upon completion of the proceedings described in this notice, FEA may determine to issue Prohibition Orders to some or all of the above-named installations. These Prohibition Orders will not become effective, however, until (1) either (a) the Administrator of the Environmental Protection Agency (EPA) notifies the FEA, in accordance with Section 119(d)(1)(B) of the Clean Air Act, that the installation is able to burn coal and to comply with all applicable air pollution control requirements without a compliance date extension under Section 119(c) of such act, or (b) if such notification is not given by EPA, the date that the Administrator of EPA certifies, pursuant to Section 119(d)(1)(B) of the Clean Air Act, is the earliest date that the installation will be able to comply with all applicable requirements of Section 119 of that Act, and (2) FEA has considered the environmental impact of making the order effective, pursuant to 10 CFR 208.3(a)(4) and 305.9, and has served the affected installation with a Notice of Effectiveness, as provided in 10 CFR 303.10(b), 303.37(b) and 305.7. The date the Prohibition Order will be effective will be stated in the Notice of Effectiveness.

10 CFR 305.9 requires that, prior to issuance of a Notice of Effectiveness to an installation, FEA shall perform an analysis of the environmental impact of the issuance of such Notice of Effectiveness. That analysis shall result in either (1) issuance of a declaration that the Prohibition Order will not, if made effective by issuance of a Notice of Effectiveness, be likely to have a significant impact on the quality of the human environment, or (2) the preparation by FEA of an environmental impact statement covering significant site-specific impacts that are likely to result from the Prohibition Order and that have not been adequately addressed in the Final Programmatic Environmental Impact Statement or in other official documents made publicly available. If FEA prepares an environmental impact statement covering significant site-specific impacts resulting from making a Prohibition Order effective, the statement shall be prepared and published for comment in accordance with Section 102(2)(C) of the National Environmental Policy Act of 1969 prior to issuance of a Notice of Effectiveness. Interested persons may re-

quest a public hearing pursuant to 10 CFR 303.173 to comment on the contents of a draft environmental impact statement. With respect to comments regarding any impact on air quality that might result from a proposed Prohibition Order, however, it should be recognized that ESECA has assigned to EPA the primary responsibility for analyzing the effect of any such order on the Nation's air quality and for determining the applicable air pollution control requirements that apply to the installation that has been issued an order. It is expected that, in almost every case, an installation to which a Prohibition Order is issued will be eligible to apply to EPA for a compliance data extension. In connection with that application, EPA must also provide an opportunity for written comment and oral presentation of data, views, and arguments by interested persons. Enclosed with the Notice of Effectiveness may be a compliance reporting schedule to insure that the installation will be able to comply with the prohibition of the burning of natural gas or petroleum products as a primary energy source on the effective data specified in the Notice of Effectiveness.

Public comment on the proposals to issue Prohibition Orders to the installations listed above is invited in the form of written and oral presentation of data, views, and arguments. Comments should relate to individual docket numbers and should make clear to which docket number the individual comment is addressed.

Comments should address (1) the adequacy and validity of each of the proposed findings and the conclusions and rationale in support of these findings, (2) the environmental impact of making effective a Prohibition Order, including any site-specific environmental impacts, and (3) any other aspects or impacts of the proposed Prohibition Order believed to be relevant.

Pursuant to 10 CFR 303.173 (a) and (d) and 305.5, FEA hereby announces that a public hearing to receive oral presentation of data, views, and arguments of interested persons will be held beginning at 9 a.m. on May 24, 1977, at The Salt Palace, Room 220, South Temple West, Salt Lake City, Utah 84101. Any person who has an interest in the subject of the hearing or who is a representative of a group or class of persons which has an interest in the subject of the hearing may make a written request, or a verbal request if confirmed in writing, for an opportunity to make an oral presentation. That request should be directed to Luther Ciemmer, FEA Region VIII, P.O. Box 26247, Belmar Branch, 1075 South Yukon Street, Lakewood, Colorado 80226, 303-234-2165. The request should be received before 4:30 p.m., Thursday, May 19, 1977. The request should describe the person's interest in the issue(s) involved; if appropriate, it should state why the person is an appropriate representative of the group or class of persons which has such an interest; it should give a concise summary of the proposed oral presentation and a phone number where the person may be contacted through May 23, 1977. Speakers should submit ten (10) copies of their oral presentation if possible, unless such presentation is less than five (5) pages, in which case only one copy is required, to Dudley Faver, Regional Administrator, Federal Energy Administration, P.O. Box 262 47, Belmar Branch, 1075 South Yukon Street, Lakewood, Colorado 80226, before 4:30 p.m., Monday, May 23, 1977. Speakers will be contacted by an FEA representative before 4:30 p.m., Friday, May 20, 1977, to confirm receipt of the written request.

Detailed technical data, views, and arguements should be contained in a written submission in support of the oral presentation. The oral presentation itself should be a summary of those written comments.

While FEA will endeavor to provide adequate opportunity to all who desire to speak, FEA reserves the right to limit the number of persons to be heard at the hearing, to schedule their respective presentations and to establish the procedures governing the conduct of the hearing. The length of time allocated to each presentation may be limited on the basis of the number of persons requesting to be heard. The FEA will prepare an agenda that shall provide, to the extent possible, for the presentation of all relevant data, views, and arguments.

An FEA official will be designated to preside at the hearing which will not be a judicial or evidentiary hearing. During oral presentations only those conducting the hearing may ask questions. There will be no cross-examination. At the conclusion of all initial oral presentations, each person who has made an oral statement will be given the opportunity, if he or she so desires, to make a rebuttal statement. The rebuttal statements will be given in the order in which the initial statements were made and will be subject to time limitations.

Any interested person may submit written questions to the presiding officer to be asked of any person making an oral presentation. The presiding officer will determine whether to ask the question, having first determined whether the question is relevant, and whether adequate time may be afforded for an answer.

Any further procedural rules needed for the proper conduct of the hearing will be announced by the presiding officer.

A transcript of the hearing will be made and it, together with any written comments submitted in the course of the hearing, will be retained by the FEA and made available for inspection and copying at the Freedom of Information Reading Room, Room 2107, Federal Building, 12th and Pennsylvania Avenue, NW., Washington, D.C. 20461, and the FEA Regional Office, 1075 South Yukon Street, Lakewood, Colorado 80226, between the hours of 8 a.m. and 4:30 p.m., Monday through Friday. Anyone may purchase a copy of the transcript from the reporter.

Interested persons are invited to submit written comments consisting of data, views, and arguments with respect to these proposed Prohibition Orders to Executive Communications, Box MK, Federal Energy Administration, Federal Building, Room 3317, 12th and Pennsylvania Avenue, NW., Washington, D.C. 20461.

Comments and other documents submitted to FEA Executive Communications should be identified on the outside of the envelope in which they are transmitted and on the document itself with the designation "Proposed Prohibition Order for the Installation". Fifteen copies should be submitted.

All written comments received by 4:30 p.m., Tuesday, June 14, 1977, all oral presentations, and all other relevant information submitted to or available to FEA will be considered by FEA prior to issuance of a Prohibition Order.

Any information or data considered to be confidential by the person furnishing it must be so identified and submitted in writing, one copy only. The FEA reserves the right to determine the confidential status of the information or data and to treat it in accordance with that determination.

Copies of the regulations implementing Section 2 (a) and (b) of ESECA (10 CFR Parts 303 and 305) are available from the following FEA Regional Offices:

REGION, ADDRESS AND PHONE

I. Robert Mitchell, Regional Administrator, 150 Causeway Street, Room 700, Boston, Massachusetts 02114—617-223-3701.

II. Alfred Kleinfield, Regional Administrator, 26 Federal Plaza, Room 3206, New York, New York 10007—212-264-1021.

III. J. A. LaSala, Regional Administrator, 1421 Cherry Street, Room 1001, Philadelphia, Pennsylvania 19102—215-597-3390.

IV. Donald Allen, Regional Administrator, 1655 Peachtree Street, NE, 8th Floor, Atlanta, Georgia 30309—404-526-2837.

V. N. Allen Andersen, Regional Administrator, Federal Office Building, 175 West Jackson Blvd., Room A-333, Chicago, Illinois 60604—312-353-0540.

VI. Delbert Fowler, Regional Administrator, Post Office Box 35228, 2626 West Mockingbird Lane, Dallas, Texas 75235—214-749-7345.

VII. Nell Adams, Regional Administrator, 1150 Grand Avenue, Kansas City, Missouri 64106—816-374-2061.

VIII. Dudley Faver, Regional Administrator, Post Office Box 26247, Belmar Branch, 1075 South Yukon Street, Lakewood, Colorado 80226—303-234-2430.

IX. William Arnts, Regional Administrator, 111 Pine Street, San Francisco, California 94111—415-556-7216.

X. Jack B. Robertson, Regional Administrator, 1992 Federal Building, 915 Second Avenue, Seattle, Washington 98174—206-442-7250.

MFBI PROHIBITION ORDER CANDIDATE IDENTIFICATION AND SELECTION METHODOLOGY

FEA has engaged in a two year, two part, process in which it first identified, after extensive information gathering, the potential universe of major fuel burning installations (MFBI's) in order

to determine which MFBI's might be subject to Prohibition Orders. FEA then performed a detailed analysis of individual potential order recipients to determine whether facts would warrant publication of a Notice of Intention (NOI) to Issue a Prohibition Order to any of the potential order recipients.

I. DETERMINATION OF CANDIDATE UNIVERSE

On March 20, 1975, by Notice in the FEDERAL REGISTER (40 FR 12706), FEA required MFBI's with design firing rates in excess of 100 million Btu's per hour to provide basic identifying information. (FEA in its regulations published on May 9, 1975, (40 FR 20463) adopted the 100 million Btu's per hour design firing rate as the minimum size MFBI that would be eligible for a Prohibition Order).

On April 18, 1975, FEA published notice in the FEDERAL REGISTER (40 FR 17328) that it would mail to all then known MFBI's a questionnaire, entitled "Major Fuel Burning Installation Coal Conversion Report" (Form FEA C-602-S-O), designed to provide FEA with additional information needed to help determine whether the MFBI's would be candidates for Prohibition Orders. Questionnaires were mailed to those respondents to the March 20, 1975, FEDERAL REGISTER notice and to other MFBI's identified through data provided by FEA regional personnel, the Environmental Protection Agency, other Federal agencies, and through contact with trade associations. A total of 822 parent companies responded to the survey, identifying 3,482 installations and 6,289 individual units.

The first survey provided FEA with historical information on quantity and quality of fuel use and preliminary pollution control data relative to the facilities in question.

Compilation and evaluation of the information received from the survey led to development of a suplemental questionnaire (Form FEA C-602-S-1) to elicit data on the financial situation of owners of MFBI's, including information designed to ascertain what the effect of a Prohibition Order would be on an individual company basis. This questionnaire was designed to provide a basis for subsequent analysis of the MFBI in terms of financial capability, additional capital investment costs resulting from a Prohibition Order, operating cost differentials and coal and coal transportation availability. This supplemental questionnaire was sent in June 1976 to various owners of MFBI's to obtain information on 161 sites and 281 individual units.

Most of the supplemental questionnaires (involving 138 sites and 246 units) were sent to owners of MFBI's identified as capable of burning coal in the first questionnaire and which, in 1974, burned at least 150,000 barrels of oil or 921,000,000 cubic feet of natural gas or a BTU equivalent combination. These MFBI's were chosen because of their potential for large fuel savings and the potential low conversion costs to fuel savings ratio.

The other supplemental questionnaires were sent to MFBI's which had indicated an intention to discontinue coal use (23 sites at which there were 35 units).

In September 1976, after responses to the supplemental questionnaires had been received, FEA consulted with the Environmental Protection Agency (EPA) to obtain EPA's best estimate as to the means by which these MFBI's could burn coal and comply with all applicable air pollution control requirements. EPA indicated whether particular MFBI's would require upgrading, or installation of electrostatic precipitators, installation of flue-gas desulfurization devices, or whether the MFBI could burn coal that would conform to air pollution control requirements without pollution control equipment.

II. SITE SPECIFIC ANALYSIS.

Once FEA had gathered the supplemental data relating to the 161 sites, it then conducted a technical analysis for each respondent to the supplemental questionnaire.

FEA prepared a technical summary based on the information provided to enable the Agency to analyze each respondent's potential amenability to receipt of an NOI. The technical summary consisted of the following data:

a. Expected remaining useful life (respondent's and FEA's estimates);
b. Unit capacity;
c. Fuel consumption for 1975;
d. The last year coal was burned at the installation;
e. Costs of converting to coal, including pollution control equipment costs, if any (respondent's and FEA's estimates);
f. Type of pollution control equipment, if any, required (respondent's and EPA's estimates); and
g. Other relevant factors, such as percent sulfur content in coal that would be required to insure compliance with environmental standards.

FEA eliminated or deferred from further consideration those MFBI's for which the following criteria were applicable:

a. Remaining useful life of the MFBI on January 1, 1978 would be less than one year (based on an expected useful life of 40 years);
b. The utilization factor of the MFBI was less than 20 percent;
c. Space required for coal use at the installation was inadequate or unavailable;
d. Since filing the original questionnaire, the MFBI had been converted to coal as its primary energy source or the owner has certified that the MFBI will be so converted in the near future;
e. The MFBI used (in the latest year for which fuel use figures are available) significantly less than 2×10^{12} BTU's of oil or natural gas.

Items a or b above, would prevent FEA from finding that burning coal by the MFBI would be practicable. FEA assumed a forty-year useful life as a reasonable estimate base on general industrial averages. FEA has decided not to analyze MFBI's that have already converted to coal, since the basic purposes of ESECA have already been accomplished by such conversions and FEA has concluded that its resources would be allocated by concentrating on those MFBI's which are not now burning coal.

Certain MFBI's were eliminated from further analysis upon FEA's determination that one or more of the factors which FEA must consider pursuant to § 305.4(c) of its regulations would have resulted in disqualification of a particular MFBI. Such eliminations were based on factors such as process fuel uses peculiar to the MFBI's, inadequate land or space for coal related facilities, unique or unusual environmental constraints, and other similar disqualifying considerations.

If in FEA's judgment, analysis of the summary information raised issues that required further investigation, FEA conducted visits to the specific sites. Site visits were employed in circumstances in which large discrepancies between FEA's and the MFBI's cost estimates were observed, unusual technical problems were presented by the MFBI with respect to coal use, and when other disparities occurred between the information submitted by the MFBI and that developed independently by FEA. Information developed during the site visits served to either eliminate an MFBI from further consideration, through the aforementioned criteria, or served to demonstrate that FEA should continue its analysis.

For each MFBI not eliminated through any of the above criteria, FEA has calculated the net operating cost differential between using coal as the MFBI's primary energy source and using either natural gas or petroleum products.

A. *Calculation of net operating cost differential.* The net operating cost differential consists of the sum of (1) annualized increased capital investment costs required for conversion to coal, (2) differences in operating and maintenance costs (including the fuel cost differential), and (3) the potential tax consequences attendant to conversion. Initially, FEA performs two calculations in determining the net operating cost differential, one using cost figures supplied by the MFBI and the other using FEA's own estimates. When the MFBI's figures are within a reasonable range of FEA's estimates, FEA generally accepts the MFBI's figures. Gross discrepancies are examined in more detail by FEA to determine the reasonableness of the differing estimates and to reconcile differences.

The elements of the three parts of the net operating cost differential are explained below:

1. *Capital investment costs.* The primary element in this part is the cost of equipment acquisition and refurbishment required for conversion to coal, including refurbishment or acquisition of pollution control equipment. In determining the estimated annual increase fixed costs to the owner resulting from such capital investment, FEA calculates the annual depreciation of equipment costs over the expected remaining useful service life of the MFBI (including con-

sideration of the investment tax credit) and adds the estimated annual cost of capital.

Annual depreciation is calculated as follows: a. Determine cost of new equipment (including pollution control equipment) minus investment tax credit of 10 percent.

b. Divide the figure in a. above, by the expected remaining useful life of the MFBI after conversion is completed. FEA presumes that the MFBI's determination of remaining useful life is correct if it results in a total useful life of at least 40 years. Otherwise, FEA will conduct a more detailed examination of the MFBI.

Calculation of the approximate annual cost of capital is as follows: a. New and refurbished equipment costs minus the investment tax credit, plus.

b. Twice the cost of land acquisitions required for conversions to coal burning.

c. The total of (1) and (2) is divided by 2 and then multipled by a 10 percent interest rate.

2. *Operating and maintenance costs.* The primary factor considered in this calculation is the annual fuel cost differential which represents the difference between operating the MFBI with coal as its primary energy source in lieu of petroleum products or natural gas. (If the current supply of natural gas to the MFBI is curtailed, then the calculation of the fuel cost differential does not include natural gas as part of the MFBI's current fuel use to the extent of that curtailment. In such cases the NOCD was calculated on the basis of actual fuel usage.) FEA has generally accepted the coal price reported by the MFBI's. If FEA considered the stated price to be unreasonable, it further examined coal prices based upon an analysis of delivered prices of coal in the area of the MFBI under consideration and an analysis of likely coal sources. Projected coal use after conversion was calculated by converting latest annual fuel use data to its BTU equivalent for coal.

Determination of the differential relating to labor costs and the differential relating to other operating and maintenance costs was based upon estimates supplied by the MFBI's.

3. *Potential tax effects.* Federal and state tax rates have been applied to the net operating cost differential to determine maximum potential tax effects resulting from a Prohibition Order.

If the NOCD for an MFBI was positive, i.e., projects an increase in annual costs oc operations, then a calculation of the cost per barrel of oil saved was performed by dividing the NOCD by the number of barrels of oil actually used on an annual basis (or, if the MFBI was a natural gas user, the number of barrels of oil which would be required to replace the gas use on an equivalent Btu basis). This figure (cost per barrel of oil saved) was then considered in terms of the number of barrels of oil and/or MCF of natural gas that would be saved by issuance of a Prohibition Order, the effect of the NOCD on the MFBI owner's operating expenses, as well as various environmental and other factors in reaching the final determination as to which candidates should receive an NOI.

It is to be noted that much of the information used by FEA to make its practicability findings is arguably confidential under 18 U.S.C. 1905. Therefore, such information has not appeared in the Appendix to the NOI. The calculations have been explained in each case and the data are available to the representatives of the owner of the MFBI.

Any questions regarding this Notice should be directed to the FEA National Office as follows: Federal Energy Administration, Code OCU (Prohibition Order: ---------- Installation), Washington, D.C. 20461, 202–566–7941.

(Energy Supply and Environmental Coordination Act of 1974 (15 U.S.C. 791 et seq.), as amended by Pub. L. 94–163; Federal Energy Administration Act of 1974 (15 U.S.C. 761 et seq.), as amended by Pub. L. 94–385; E.O. 11790 (39 FR 23185).)

Issued in Washington, D.C., May 9, 1977.

ERIC J. FYGI,
Acting General Counsel,
Federal Energy Administration.

APPENDIX: PROPOSED FINDINGS AND RATIONALE FOR NOTICE OF INTENTION TO ISSUE A PROHIBITION ORDER

ESECA and the FEA regulations require FEA to make certain findings before issuing a Prohibition Order to a major fuel burning installation (MFBI). FEA's proposed findings are set out below with respect to the MFBI's named below. Supporting rationale and conclusions are also set forth.

Docket No.	Owner	Installation	Unit No.	Location
OCU-2979	Kennecott Copper Corp.	Utah Copper division	1, 2, 3, 4	Salt Lake City, Utah.

These findings, which are now proposed by FEA, are based on the information that has been provided to and developed by FEA prior to the issuance of this Notice of Intention (NOI) to issue a Prohibition Order.

Kennecott Copper Corporation shall be referred to as the "owner" and as "Kennecott". "Utah Copper Division Units 1, 2, 3 and 4" shall be referred to as the "MFBI's" and as "Utah Copper 1, 2, 3 and 4."

I. CAPABILITY AND NECESSARY PLANT EQUIPMENT TO BURN COAL

FEA proposes to find that on June 22, 1974, Utah Copper 1, 2, 3 and 4 had the capability and necessary plant equipment to burn coal. This proposed finding is based on the facts and interpretation stated below:

A. Kennecott, in a Major Fuel Burning Installation Coal Conversion Report, Section II, Questions 6 and 12–14 (Form FEA C–602–S–0), filed on June 26, 1975, indicated that each MFBI had in place on June 22, 1974, a boiler that was capable of burning coal. The boilers had been designed and constructed or modified to burn coal as their primary energy source, notwithstanding the fact that on June 22, 1974, the MFBI's may not have been burning coal as their primary energy source.

B. Based on information Kennecott filed with FEA dated August 12, 1976, and other information available to FEA, the following plant equipment and facilities at Utah Copper 1, 2, 3 and 4 would have to be acquired or refurbished in order for these MFBI's to burn coal as their primary energy source:

1. Coal handling facilities;
2. Car thaw shed;
3. Car unloading system; and
4. Coal storage.

C. FEA proposes to find that on June 22, 1974, Kennecott had all other significant plant equipment and facilities associated with the burning of coal.

D. Within the meaning of ESECA and the regulations promulgated pursuant thereto, the equipment and facilities listed in paragraph B, above, do not individually or in combination constitute a lack of capability and necessary plant equipment to burn coal as of June 22, 1974.

II. THE BURNING OF COAL IN LIEU OF NATURAL GAS OR PETROLEUM PRODUCTS IS PRACTICABLE AND CONSISTENT WITH THE PURPOSES OF ESECA

FEA proposes to find that the burning of coal in lieu of petroleum products or natural gas at Utah Copper 1, 2, 3 and 4 is practicable and consistent with the purposes of ESECA. This proposed finding is based upon an analysis by FEA of the fuel consumption of these boilers for the period 1973–1977, the remaining useful service life of each boiler after conversion, the net operating cost differential that would result from compliance with a Prohibition Order, as well as the facts and interpretations referenced below:

A. *The burning of coal is practicable.* 1. *Anticipated fuel supplies.—Curtailment of natural gas supply.* Based on information obtained from the Federal Power Commission, the natural gas supplier, and in certain cases the Owner, FEA presumes that these MFBI's will experience a substantial curtailment of their present supply of natural gas. This curtailment will result in increased reliance on alternate fuels in the future.

2. *Costs associated with burning coal.* a. *Capital investment costs.* The total estimated initial capital investment costs, including financing costs, that would result from the acquisition and refurbishment of equipment and facilities associated with the burning of coal at Utah Copper 1, 2, 3 and 4 have been determined.

This determination was based on existing FEA information and analysis as well as information filed with FEA by the owner. Approximate costs to comply with applicable environmental protection requirements have also been considered, including the cost of compliance with the air pollution control requirements of the Clean Air Act.

b. *Annual operating and maintenance costs.* The expected increase in operating and maintenance costs, exclusive of fuel costs, that would result from the burning of coal has been calculated based on information supplied by the owner or otherwise acquired by FEA.

c. *Fuel costs.* Based on an analysis of annual fuel consumption and fuel cost information supplied by the owner and/or, in

appropriate circumstances, upon FEA's fuel cost estimates, FEA has determined that the burning of coal in lieu of natural gas or petroleum products at Utah Copper 1, 2, 3 and 4 will result in a decrease in annual fuel costs.

d. *Net operating cost differential.* Based on the factors stated in paragraphs A.1. a.–c., above, as well as the expected remaining useful life of the boilers after conversion, FEA has determined that the net annual operating cost differential, hereafter "NOCD" (which represents the difference between operating the boilers with coal and alternate fuel(s) as their primary energy source), resulting from the conversion of Utah Copper 1, 2, 3 and 4, will represent an annual cost increase of $792,606.

3. *Reasonableness of additional cost of burning coal.* The following analysis of the costs of conversion provides the basis for deciding that compliance with the proposed order is not unreasonable.

By converting from burning natural gas to burning coal as their primary energy source, these MFBI's would experience a net annual operating cost increase, but would save a substantial amount of natural gas. This cost would only be incurred for a limited period because these MFBI's will eventually experience a substantial curtailment of their supply of natural gas. If the prohibition order were not issued to these MFBI's they could alternately replace their current natural gas supply with either petroleum products or coal for the period following such substantial curtailment of their natural gas supply.

In the calculation of the NOCD, FEA has considered oil as a substitute fuel for curtailed natural gas. In calculating the NOCD, in those instances where the MFBI has experienced no curtailment of its natural gas supply, FEA considered the present fuel usage. The net annual operating cost increase for these MFBI's resulting from operating on coal as their primary energy source, instead of petroleum products (and/or natural gas where applicable), will be approximately $792,606.

Although the use of the coal alternative, instead of potential petroleum products, could be expected to result in a net annual operating cost increase, FEA has determined that the prohibition of burning natural gas or petroleum products as the primary energy source at Utah Copper 1, 2, 3 and 4 is not unreasonable.

Burning of coal by these MFBI's as their primary energy source instead of petroleum products would result in additional capital investment costs and annual operating and maintenance costs exclusive of fuel costs. Any additional conversion costs would, however, be mitigated by the savings in fuel costs inherent in burning coal. Notwithstanding the fact that these MFBI's would experience annual savings in their total fuel costs should they convert to coal instead of converting to petroleum products, there would be a net increase in the costs of these MFBI's.

Although conversion to the burning of coal instead of petroleum products would be expected to increase the costs incurred by Utah Copper 1, 2, 3 and 4 by $792,606 per year, FEA proposes to find that such increased cost, per barrel of oil saved is not unreasonable given the purposes of ESECA. This determination is based on consideration of the substantial potential oil savings that would result from conversion to coal. The determination that the costs of burning coal instead of petroleum products would not be unreasonable is further supported by consideration of such costs in relation to the expected remaining useful life of these MFBI's, the size and resources of the owner as examined in the following discussion of financial capability, and the nature of the expected operations of these MFBI's.

The additional costs that would be incurred if FEA were to prohibit the burning of natural gas or petroleum products as the primary energy source at Utah Copper 1, 2, 3, and 4 would only be incurred for a limited period of time. In view of the scarcity of national supplies of natural gas and the likelihood that Utah Copper 1, 2, 3, and 4 will experience a substantial curtailment of their present natural gas supply in the future, FEA has determined that the cost of burning coal in lieu of natural gas is not unreasonable. (Final Report Oil and Gas Resources, Reserves, and Productive Capacities, Volumes I and II, Federal Energy Administration, October 1975.)

4. *Financial capability of the owner.* a. *Recovery of capital investment.* FEA proposes to find that compliance with a Prohibition Order by Utah 1, 2, 3 and 4 would be economically feasible. FEA's analysis took into consideration the financial capability of the owner and is based upon the owner's financial position as reported in the Dunn and Bradstreet Reference Book (March 1977). Where necessary, FEA performed an independent analysis of the owner's financial capability, considering such factors as the owner's current financial statement and the additional capital investment required for the owner to comply with this NOI and all other NOI's which are currently under consideration, as well as additional capital investment costs related to all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2 (a) and (c) of ESECA to MFBI's owned by Kennecott. FEA related these additional capital investment costs to the total capitalization of Kennecott and the remaining useful life after conversion of Utah Copper 1, 2, 3 and 4. FEA does not consider the effect of the added capital investment costs to represent an unreasonable burden given the financial capabilities of Kennecott to assume such costs.

b. *Total annual costs associated with conversion.* The total estimated annual increase in costs (amortized increased capital investment costs and other costs, exclusive of fuel costs) associated with the burning of coal as opposed to natural gas attributable to compliance with this NOI and all other NOI's which are currently under consideration has been determined. FEA also took into consideration total annual costs resulting from compliance with all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2(a) and (c) of ESECA to Kennecott MFBI's. Notwithstanding the potential value of fuel cost savings, attributable to compliance with this NOI and all other NOI's currently under consideration, Kennecott's total annual costs after conversion will increase by $792,606.

B. *Consistency with the purposes of ESECA.* Because the issuance of a Prohibition Order to Utah Copper 1, 2, 3 and 4 will discourage the use of natural gas or petroleum products and encourage the increased use of coal, FEA proposes to conclude that this action would be consistent with the purpose of ESECA to provide a means to assist in meeting the essential needs of the United States for fuels.

On the basis of the environmental analysis which FEA is required to conduct prior to issuance of a Notice of Effectiveness of a Prohibition Order, as well as the necessity for these MFBI's to comply with the Clean Air Act and other applicable environmental protection requirements, FEA proposes to conclude that a Prohibition Order to Utah Copper 1, 2, 3 and 4 would be consistent with the purpose of ESECA to provide for a means to assist in meeting the essential needs of the United States for fuels in a manner which is consistent, to the fullest extent practicable, with existing national commitments to protect and improve the environment.

III. COAL AND COAL TRANSPORTATION FACILITIES WILL BE AVAILABLE TO THESE MFBI'S DURING THE PERIOD UNTIL DECEMBER 31, 1984

A. *Coal availability.* 1. *National coal reserves.* United States coal reserves are more than sufficient to supply national needs for the foreseeable future. U.S. Department of the Interior, Bureau of Mines (BCM) data show a demonstrated coal reserve base of over 400 billion tons, over half of which is currently technically and economically recoverable (Demonstrated Coal Reserve Base of the United States, by Sulfur Category, on January 1, 1974, Bureau of Mines (May 1975) [hereafter "BOM Survey"]). Within these recoverable reserves approximately 200 billion tons contain 1 percent or less sulfur by weight. To determine when certain quantities of these reserves are expected to be available, FEA has examined several studies referenced herein, which together provide the best current evidence as to coal availability for the period ending December 31, 1984.

2. *National coal production and demand.* The comparison, stated below, of estimated national coal production, national coal demand, and the total tonnage of uncommitted planned national coal production (derived from resonses to a survey of coal producing companies) shows that there should be sufficient production of coal to meet the total national demand through 1980. Beyond 1980, plans for new production are not yet fully developed because few coal producers have firm expansion plans that extend that far into the future; however, the projected total planned national coal production for 1985 already meets 99 percent of the total U.S. demand expected in 1985. With time, more potential mine developments will become firm plans, thus increasing the planned production

a. *National coal production.* It is conservatively estimated that it will be practicable to produce coal nationally in at least the following quantities:

Year:	*Production potential (million tons)*
1977	732.3
1978	791.6
1979	851.4
1980	911.7
1981	960.0
1982	994.3
1983	1,017.4
1984	1,028.7
1985	1,029.6

The figures shown above are derived from FEA's Coal Mine Expansion Study (May 1976). This study demonstrates that most coal producers did not have firm or accurate plans for new capacity additions beyond 1980. The 1985 projection, therefore, tends to underestimate actual production potential.

An FEA study, Coal Availability Report, April 1977, (hereafter "Availability Report"), indicates current plans for nationwide production of uncommitted coal as follows:

Year:	*Production (million tons)*
1978	124.3
1979	243.1

1980	293.3
1981	350.0
1982	369.9
1983	396.2
1984	475.5
1985	544.9

b. *National demand exclusive of ESECA prohibition order demand.* The estimated national demand, excluding any increased demand resulting from FEA action under the authority of Section 2(a) of ESECA, is as follows (FEA 1976 National Energy Outlook):

Year:	Demand (million tons)
1978	730
1979	764
1980	799
1981	842
1982	887
1983	935
1984	985
1985	1,040

c. *National ESECA prohibition order demand.* The estimated potential demand for coal resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA is no more than the following ("Availability Report"):

Year:	Demand (million tons)
1978	11.0
1979	22.4
1980	32.5
1981	35.8
1982	57.4
1983	59.8
1984	59.8

3. *Characteristic coal production and demand.* FEA's "Availability Report" identifies coal of specific quality characteristics available for use at these MFBI's. The survey is based on data from 31 mining companies that supplied useful information on 96 mining units. Responses from these companies identified planned production of coal which is not now committed to a specific buyer. For those companies which did not respond to the survey, FEA estimated their uncommitted planned production based on their 1974 production.

a. *Characteristic coal requirements for these MFBI's.* FEA's "Availability Report" has determined that boilers of the type used at Utah Copper 1, 2, 3 and 4 will be able to burn coal of the following characteristics and comply with all applicable air pollution control requirements:

Btu's/lb	[1] 10,000
Moisture (percent)	[2] 15
Ash (percent)	[2] 20
Volatile (percent)	[1] 15
Ash softening temp. (° F)	[1] 2,200
Sulfur (approximately) (percent)	[2] 1.0

[1] Minimum.
[2] Maximum.

b. *Characteristic coal demand from these MFBI's.* The potential demand for coal, of the type described above, which would result from this NOI is estimated to be as follows:

Year:	Demand (thousand tons)
1978 and thereafter	521

c. *National planned production, characteristic coal.* FEA's "Availability Report" has has determined that coal of the type described in paragraph A.3.a., above, is uncommitted to a specific buyer and will be potentially available to these MFBI's in a nationwide market as follows:

Year:	Production (thousand tons)
1978	54,090
1979	97,325
1980	124,328
1981	149,252
1982	158,268
1983	170,320
1984	201,207

d. *National ESECA prohibition order demand for coal, regardless of characteristics.* The national planned production of characteristic coal, as stated in paragraph A.3.c., above, exceeds potential demand for coal regardless of characteristic expected from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. National ESECA Prohibition Order demand as previously stated in paragraph A.2.c., above is no more than the following (Availability Report):

Year:	Demand (thousand tons)
1978	11,032
1979	22,434
1980	32,483
1981	35,755
1982	57,362
1983	59,815
1984	59,815

e. *Regional planned production, characteristic coal.* Coal with the characteristics described in paragraph A.3.a., above, is uncommitted and will be potentially available to these MFBI's (in a probable regional supply/demand relationship related to the location of these MFBI's) from BOM Districts 19, 21, and 22 as follows (Availability Report):

Year:	Production (thousand tons)
1978	24,781
1979	41,692
1980	53,947
1981	64,581
1982	69,510
1983	75,863
1984	93,722

f. *Regional ESECA prohibition order demand for coal, regardless of characteristic.* The expected regional production of characteristic coal, as stated in paragraph A.3.e., above, exceeds the potential demand for coal regardless of characteristic from BOM Districts 19, 21, and 22 expected to result from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. This potential regional demand is estimated in FEA's "Availability Report" to be no more than the following:

Year:	Demand (thousand tons)
1978	4,696
1979	7,195
1980	7,416
1981	7,416
1982	9,017
1983	9,017
1984	9,017

g. *Regional ESECA prohibition order demand for coal by sulfur characteristic.* The potential regional demand for coal from BOM Districts 19, 21, and 22 with a 0.61–1.01 percent sulfur content (which includes the 1.0 percent maximum sulfur content described in paragraph A.3.a., above) resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA is estimated in FEA's "Availability Report" to be no more than the following:

Year:	Demand (thousand tons), percent sulfur 0.61–1.01
1978	1,955
1979	4,043
1980	4,133
1981	4,133
1982	5,733
1983	5,733
1984	5,733

The regional planned production of coal stated in paragraph A.3.e., above, with the characteristics described in paragraph A.3.a., above, far exceeds this potential ESECA regional demand for coal by sulfur characteristic.

4. *State or local laws.* FEA has found no state or local laws or policies limiting the extraction or utilization of coal that would adversely affect these production figures, and none have been brought to FEA's attention.

5. *Conclusion.* FEA's "Availability Study" has indentified nationally and in BOM Districts 19, 21, and 22 uncommitted coal production that meets the requirements of Utah Copper 1, 2, 3, and 4 as described in paragraph A.3.a., above. FEA proposes to find that this uncommitted coal exists in amounts sufficient in any year to meet the estimated additional demand for coal, both nationally and from these Districts, resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA.

Coal for these MFBI's will probably be bought from producers according to regional supply/demand relationships related to the MFBI's location from BOM Districts 19, 21, and 22. FEA observes, however, that the MFBI's could purchase coal in other markets as such production becomes available. (The Feasibility of Considering Expanded Use of Western Coal by Midwestern and Eastern Utilities in the Period 1978 and Beyond, School of Engineering, University of Pennsylvania, November 7, 1975.)

B. *Coal transportation.* 1. *Location of MFBI's and coal supply.* Based on an FEA study, *Coal Transportation Availability Report*, April 1977, (hereafter "Transportation Availability Report"), coal from Utah Copper 1, 2, 3, and 4 would probably come from BOM District 19 as the primary supply area and from BOM District 20 as the alternate supply area. While these supply regions are among the nearest available sources able to supply complying coal to the plant, complying coal could be transferred by rail from other identified sources within the United States as well. The analysis of transportation availability is based on the most likely route as well as two alternate routes. These routes were chosen to demonstrate transportation availability.

2. *Route of coal shipment.* The primary route for coal delivery for Utah Copper 1, 2, 3, and 4 is to originate coal in BOM District 19, in the Casper, Wyoming, area on the Burlington Northern (BN) Railroad. The BN would move it to Wendover, Wyoming, where Colorado & Southern (C&S) would then carry the coal to Cheyenne, Wyoming. Union Pacific would then pick it up and deliver it to Utah Copper 1, 2, 3, and 4. The total rail distance is about 715 miles.

The alternate route from the primary supply area originates coal in the Casper, Wyoming area, on the BN which moves it to Wendover, Wyoming where the C&S picks it up to move it to Denver, Colorado via Cheyenne, Wyoming. The Denver and Rio Grande Western (D&RGW) then moves it via Grand Junction, Colorado and Provo, Utah, for delivery to Utah Copper 1, 2, 3 and

4. The total rail distance is about 945 miles.

An alternate route from the alternate supply area originates coal in BOM District 20 in the Salt Lake City area where trucks would deliver the coal to Utah Copper 1, 2, 3 and 4.

3. *Originating trunk carrier.* The BN, originating carrier of coal for Utah Copper 1, 2, 3 and 4 has about 19,000 hopper cars in service. Using an average number of 20 deliveries per year per 77-ton car, the BN may need as many as 146 additional cars to handle the increased demand from Utah Copper 1, 2, 3 and 4. This estimate assumes that the railroad would neither have excess originating capacity nor obtain cars from other carriers in the originating vicinity.

FEA's "Transportation Availability Report" concluded that for all potential Prohibition Order candidates studied, there would be no major constraints in transporting coal. This study examined existing rail transportation capacity, including unloading docks, where applicable, and took into account projections made by all carriers to meet the anticipated demand for all types of transportation facilities assuming all MFBI's studied were to receive orders under Section 2(a) of ESECA.

FEA has not found nor has it been informed of any apparent constraints to carrying coal for any alternate or intermediate carriers should they be used.

4. *Destination carrier and MFBI facilities.* Utah Copper 1, 2, 3 and 4 has indicated that the boilers currently burn coal and natural gas on an interruptable basis. Both rail (D&RGW) and trucks have been used for coal deliveries, however, if coal is used exclusively, additional storage must be developed. Coal is presently transported to the plant site by trucks. A new coal pile location has been considered along with a new rail spur line to the new location. It is expected that these installations can be accomplished prior to the effective date for coal burning.

There are no other obstacles to the delivery of coal to Utah Copper 1, 2, 3 and 4.

5. *Conclusion.* Coal transportation facilities will be available for the period a Prohibition Order is expected to be in effect since no major constraints to coal delivery over the primary route to Utah Copper 1, 2, 3 and 4 presently exist, and alternate routes are available.

[FR Doc.77-13698 Filed 5-12-77;8:45 am]

ENERGY SUPPLY AND ENVIRONMENTAL COORDINATION ACT

Intention To Issue Prohibition Orders to Certain Installations; Brown Co., et al.

The Federal Energy Administration (FEA) hereby gives notice of its intention to issue Prohibition Orders, pursuant to the authorities granted it by Section 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974, as amended (ESECA), and Title 10, Code of Federal Regulations (10 CFR), Parts 303 and 305 to the following installations:

Docket No.	Owner	Installation	Unit No.	Location
OCU-0004	Brown Co., Specialty Papers Division.	Parchment plant	9, 10	Parchment, Mich.
OCU-1356	A. E. Staley Manufacturing Co	Decatur plant	19, 20, 21	Decatur, Ill.
OCU-1853	Marathon Oil Co	Robinson refinery	9, 10	Robinson, Ill.

FEA hereby also gives notice of the opportunity for oral and written presentation of data, views, and arguments by interested persons regarding these proposed Prohibition Orders.

The proposed orders would prohibit the above-named installations from burning natural gas or petroleum products as their primary energy source.

Prior to issuance of a Prohibition Order to an installation, Section 2(a) of ESECA and 10 CFR 303.36(b) and 305.4(b) require that FEA find that the installation had the capability and necessary plan equipment to burn coal as of June 22, 1974. A Prohibition Order may not be issued unless FEA can find that the prohibition of the utilization of natural gas or petroleum products as a primary energy source is practicable and consistent with the purposes of ESECA and that coal and coal transportation facilities will be available during the period the Prohibition Order will be in effect. FEA's proposed findings, as well as its proposed conclusions and rationale with respect to these findings, for each installation are set out in the Appendix to this notice. These findings, conclusions and rationale may be amended as a result of comments received by FEA pursuant to this notice and other information available to FEA. The findings, conclusions and rationale will be included, with any amendments, for each Prohibition Order that is issued.

Upon completion of the proceedings described in this notice, FEA may determine to issue Prohibition Orders to some or all of the above-named installations. These Prohibition Orders will not become effective, however, until (1) either (a) the Administrator of the Environmental Protection Agency (EPA) notifies the FEA, in accordance with Section 119(d)(B) of the Clean Air Act, that the installation is able to burn coal and to comply with all applicable air pollution control requirements without a compliance date extension under Section 119(c) of such Act, or (b) if such notification is not given by EPA, the date that the Administrator of EPA certifies, pursuant to Section 119(d)(1)(B) of the Clean Air Act is the earliest date that the installation will be able to comply with all applicable requirements of Section 119 of that Act, and (2) FEA has considered the environmental impact of making the order effective, pursuant to 10 CFR 208.3(a)(4) and 305.9, and has served the affected installation with a Notice of Effectiveness as provided in 10 CFR 303.10(b), 303.37(b) and 305.7. The date the Prohibition Order will be effective will be stated in the Notice of Effectiveness.

10 CFR 305.9 requires that, prior to issuance of a Notice of Effectiveness to an installation, FEA shall perform an analysis of the environmental impact of the issuance of such Notice of Effectiveness. That analysis shall result in either (1) issuance of a declaration that the Prohibition Order will not, if made effective by issuance of a Notice of Effectiveness, be likely to have a significant impact on the quality of the human environment, or (2) the preparation by FEA of an environmental impact statement covering significant site-specific impacts that are likely to result from the Prohibition Order and that have not been adequately addressed in the Final Programmatic Environmental Impact Statement or in other official documents made publicly available. If FEA prepares an environmental impact statement covering significant site-specific impacts resulting from making a Prohibition Order effective, the statement shall be prepared and published for comment in accordance with Section 102(2)(C) of the National Environmental Policy Act of 1969 prior to issuance of a Notice of Effectiveness. Interested persons may request a public hearing pursuant to 10 CFR 303.173 to comment on the contents of a draft environmental impact statement. With respect to comments regarding any impact on air quality that might result from a proposed Prohibition Order, however, it should be recognized that ESECA has assigned to EPA the primary responsibility for analyzing the effect of any such order on the Nation's air quality and for determing the applicable air pollution control requirements that apply to the installation that has been issued an order. It is expected that, in almost every case, an installation to which a Prohibition Order is issued will be eligible to apply to EPA for a compliance date extension. In connection with that application, EPA must also provide an opportunity for written comment and oral presentation of data, views, and arguments by interested persons. Enclosed with the Notice of Effectiveness may be a compliance reporting schedule to insure that the installation will be able to comply with the prohibition of the burning of natural gas or petroleum products as a primary energy source on the effective date specified in the Notice of Effectiveness.

Public comment on the proposals to issue Prohibition Orders to the installations listed above is invited in the form of written and oral presentation of data, views, and arguments. Comments should relate to individual docket numbers and should make clear to which docket number the individual comment is addressed.

Comments should address (1) the adequacy and validity of each of the proposed findings and the conclusions and rationale in support of these findings, (2) the environmental impact of making effective a Prohibition Order, including any site-specific environmental impacts, and (3) any other aspects or impacts of the proposed Prohibition Order believed to be relevant.

Pursuant to 10 CFR 303.173(a) and (d) and 305.5, FEA hereby announces that a public hearing to receive oral presentation of data, views, and arguments of interested persons will be held

beginning at 9 a.m. on May 23 and 24, 1977, at the Federal Building, Room 1903, 219 S. Dearborn Street, Chicago, Illinois 60604. Any person who has an interest in the subject of the hearing or who is a representative of a group or class of persons which has an interest in the subject of the hearing may make a written request, or a verbal request if confirmed in writing, for an opportunity to make an oral presentation. That request should be directed to George Evans, FEA Region V, Federal Office Building, 175 West Jackson Boulevard, Chicago, Illinois 60604, 312-886-5168. The request should be received before 4:30 p.m., Wednesday, May 18, 1977. The request should describe the person's interest in the issue(s) involved; if appropriate, it should state why the person is an appropriate representative of the group or class of persons which has such an interest; it should give a concise summary of the proposed oral presentation and a phone number where the person may be contacted through May 20, 1977. Speakers should submit ten (10) copies of their oral presentation if possible, unless such presentation is less than five (5) pages, in which case only one copy is required, to N. Allen Anderson, Regional Administrator, Federal Energy Administration, Federal Office Building, 175 West Jackson Boulevard, Room A-333, before May 20, 1977. Speakers will be contacted by an FEA representative before 4:30 p.m., Thursday, May 19, 1977, to confirm receipt of the written request.

Detailed technical data, views, and arguments should be contained in a written submission in support of the oral presentation. The oral presentation itself should be a summary of those written comments.

While FEA will endeavor to provide adequate opportunity to all who desire to speak, FEA reserves the right to limit the number of persons to be heard at the hearing, to schedule their respective presentations and to establish the procedures governing the conduct of the hearing. The length of time allocated to each presentation may be limited on the basis of the number of persons requesting to be heard. The FEA will prepare an agenda that shall provide, to the extent possible, for the presentation of all relevant data, views, and arguments.

An FEA official will be designated to preside at the hearing which will not be a judicial or evidentiary hearing. During oral presentations only those conducting the hearing may ask questions. There will be no cross-examination. At the conclusion of all initial oral presentations, each person who has made an oral statement will be given the opportunity, if he or she so desires, to make a rebuttal statement. The rebuttal statements will be given in the order in which the initial statements were made and will be subject to time limitations.

Any interested person may submit written questions to the presiding officer to be asked of any person making an oral presentation. The presiding officer will determine whether to ask the question, having first determined whether the question is relevant, and whether adequate time may be afforded for an answer.

Any further procedural rules needed for the proper conduct of the hearing will be announced by the presiding officer.

A transcript of the hearing will be made and it, together with any written comments submitted in the course of the hearing, will be retained by the FEA and made available for inspection and copying at the Freedom of Information Reading Room, Room 2107, Federal Building, 12th and Pennsylvania Avenue NW., Washington, D.C. 20461, and the FEA Regional Office, Federal Office Building, 175 West Jackson Boulevard, Chicago, Illinois 60604, between the hours of 8 a.m. and 4:30 p.m., Monday through Friday. Anyone may purchase a copy of the transcript from the reporter.

Interested persons are invited to submit written comments consisting of data, views, and arguments with respect to these proposed Prohibition Orders to Executive Communications, Box MK, Federal Energy Administration, Federal Building, Room 3317, 12th and Pennsylvania Avenue NW., Washington, D.C. 20461.

Comments and other documents submitted to FEA Executive Communications should be identified on the outside of the envelope in which they are transmitted and on the document itself with the designation "Proposed Prohibition Order for the _____ Installation." Fifteen copies should be submitted.

All written comments received by 4:30 p.m., Tuesday, June 14, 1977, all oral presentations, and all other relevant information submitted to or available to FEA will be considered by FEA prior to issuance of a Prohibition Order.

Any information or data considered to be confidential by the person furnishing it must be so identified and submitted in writing, one copy only. The FEA reserves the right to determine the confidential status of the information or data and to treat it in accordance with that determination.

Copies of the regulations implementing Section 2 (a) and (b) of ESECA (10 CFR Parts 303 and 305) are available from the following FEA Regional Offices:

REGION, ADDRESS, AND PHONE

I. Robert Mitchell, Regional Administrator, 150 Causeway Street, Room 700, Boston, Massachusetts 02113—617-223-3701.

II. Alfred Kleinfeld, Regional Administrator, 26 Federal Plaza, Room 3206, New York, New York 10007—212-264-1021.

III. J. A. LaSala, Regional Administrator, 1421 Cherry Street, Room 1001, Philadelphia, Pennsylvania 19102—215-597-3390.

IV. Donald Allen, Regional Administrator, 1655 Peachtree Street, N.E.—8th Floor, Atlanta, Georgia 30309—404-526-2837.

V. N. Allen Anderson, Regional Administrator, Federal Office Building, 175 West Jackson Blvd., Room A-333, Chicago, Illinois 60604—312-353-0540.

VI. Delbert Fowler, Regional Administrator, Post Office Box 35228, 2626 West Mockingbird Lane, Dallas, Texas 75235—214-749-7245.

VII. Neil Adams, Regional Administrator, 1150 Grand Avenue, Kansas City, Missouri 64106—816-374-2061.

VIII. Dudley Faver, Regional Administrator, Post Office Box 26247, Belmar Branch, 1075 South Yukon Street, Lakewood, Colorado 80226—303-234-2420.

IX. William Arntz, Regional Administrator, 111 Pine Street, San Francisco, California 94111—415-556-7216.

X. Jack B. Robertson, Regional Administrator, 1992 Federal Building, 915 Second Avenue, Seattle, Washington 98174—206-442-7250.

MFBI PROHIBITION ORDER CANDIDATE IDENTIFICATION AND SELECTION METHODOLOGY

FEA has engaged in a two year, two part, process in which it first identified, after extensive information gathering, the potential universe of major fuel burning installations (MFBI's) in order to determine which MFBI's might be subject to Prohibition Orders. FEA then performed a detailed analysis of individual potential order recipients to determine whether facts would warrant publication of a Notice of Intention (NOI) to Issue a Prohibition Order to any of the potential order recipients.

I. DETERMINATION OF CANDIDATE UNIVERSE

On March 20, 1975, by Notice in the FEDERAL REGISTER (40 FR 12706), FEA required MFBI's with design firing rates in excess of 100 million BTU's per hour to provide basic identifying information. (FEA in its regulations published on May 9, 1975, (40 FR 20463) adopted the 100 million BTU's per hour design firing rate as the minimum size MFBI that would be eligible for a Prohibition Order).

On April 18, 1975, FEA published notice in the FEDERAL REGISTER (40 FR 17328) that it would mail to all then known MFBI's a questionnaire, entitled "Major Fuel Burning Installation Coal Conversion Report" (Form FEA C-602-S-0), designed to provide FEA with additional information needed to help determine whether the MFBI's would be candidates for Prohibition Orders. Questionnaires were mailed to those respondents to the March 20, 1975, FEDERAL REGISTER notice and to other MFBI's identified through data provided by FEA regional personnel, the Environmental Protection Agency, other Federal agencies, and through contact with trade associations. A total of 822 parent companies responded to the survey, identifying 3,482 installations and 6,289 individual units.

The first survey provided FEA with historical information on quantity and quality of fuel use and preliminary pollution control data relative to the facilities in question.

Compilation and evaluation of the information received from the survey led to development of a supplemental questionnaire (Form FEA C-602-S-1) to elicit data on the financial situation of owners of MFBI's, including information designed to ascertain what the ef-

fects of a Prohibition Order would be on an individual company basis. This questionnaire was designed to provide a basis for subsequent analysis of the MFBI in terms of financial capability, additional capital investment costs resulting from a Prohibition Order, operating cost differentials and coal and coal transportation availability. This supplemental questionnaire was sent in June 1976 to various owners of MFBI's to obtain information on 161 sites and 281 individual units.

Most of the supplemental questionnaires (involving 138 sites and 246 units) were sent to owners of MFBI's identified as capable of burning coal in the first questionnaire and which, in 1974, burned at least 150,000 barrels of oil or 921,000,000 cubic feet of natural gas or a Btu equivalent combination. These MFBI's were chosen because of their potential for large fuel savings and the potential low conversion costs to fuel savings ratio.

The other supplemental questionnaires were sent to MFBI's which had indicated an intention to discontinue coal use (23 sites at which there were 35 units).

In September 1976, after responses to the supplemental questionnaires had been received, FEA consulted with the Environmental Protection Agency (EPA) to obtain EPA's best estimate as to the means by which these MFBI's could burn coal and comply with all applicable air pollution control requirements. EPA indicated whether particular MFBI's would require upgrading, or installation of electrostatic precipitators, installation of flue-gas desulfurization devices, or wether the MFBI could burn coal that would conform to air pollution control requirements without pollution control equipment.

II. SITE SPECIFIC ANALYSIS

Once FEA had gathered the supplemental data relating to the 161 sites, it then conducted a technical analysis for each respondent to the supplemental questionnaire.

FEA prepared a technical summary based on the information provided to enable the Agency to analyze each respondent's potential amenability to receipt of an NOI. The technical summary consisted of the following data:

a. Expected remaining useful life (respondent's and FEA's estimates);
b. Unit capacity;
c. Fuel consumption for 1975;
d. The last year coal was burned at the installation;
e. Costs of converting to coal, including pollution control equipment costs, if any (respondent's and FEA's estimates);
f. Type of pollution control equipment, if any, required (respondent's and EPA's estimates); and
g. Other relevant factors, such as percent sulfur content in coal that would be required to insure compliance with environmental standards.

FEA eliminated or deferred from further consideration those MFBI's for which the following criteria were applicable:

a. Remaining useful life of the MFBI on January 1, 1978 would be less than one year (based on an expected useful life of 40 years);
b. The utilization factor of the MFBI was less than 20 percent;
c. Space required for coal use at the installation was inadequate or unavailable;
d. Since filing the original questionnaire, the MFBI had been converted to coal as its primary energy source or the owner has certified that the MFBI will be so converted in the near future;
e. The MFBI used (in the latest year for which fuel use figures are available) significantly less than 2×10^{12} Btu's of oil or natural gas.

Items a or b above, would prevent FEA from finding that burning coal by the MFBI would be practicable. FEA assumed a forty-year useful life as a reasonable estimate based on general industrial averages. FEA has decided not to analyze MFBI's that have already converted to coal, since the basic purposes of ESECA have already been accomplished by such conversions and FEA has concluded that its resources would be better allocated by concentrating on those MFBI's which are not now burning coal.

Certain MFBI's were eliminated from further analysis upon FEA's determination that one or more of the factors which FEA must consider pursuant to § 305.4(c) of its regulations would have resulted in disqualification of a particular MFBI. Such eliminations were based on factors such as process fuel uses peculiar to the MFBI's, inadequate land or space for coal related facilities, unique or unusual environmental constraints, and other similar disqualifying considerations.

If in FEA's judgment, analysis of the summary information raised issues that required further investigation, FEA conducted visits to the specific sites. Site visits were employed in circumstances in which large discrepancies between FEA's and the MFBI's cost estimates were observed, unusual technical problems were presented by the MFBI with respect to coal use, and when other disparities occurred between the information submitted by the MFBI and that developed independently by FEA. Information developed during the site visits served to either eliminate an MFBI from further consideration, through the aforementioned criteria, or served to demonstrate that FEA should continue its analysis.

For each MFBI not eliminated through any of the above criteria, FEA has calculated the net operating cost differential between using coal as the MFBI's primary energy source and using either natural gas or petroleum products.

A. *Calculation of net operating cost differential.* The net operating cost differential consists of the sum of (1) annualized increased capital investment costs required for conversion to coal, (2) differences in operating and maintenance costs (including the fuel cost differential), and (3) the potential tax consequences attendant to conversion. Initially, FEA performs two calculations in determining the net operating cost differential, one using cost figures supplied by the MFBI and the other using FEA's own estimates. When the MFBI's figures are within a reasonable range of FEA's estimates, FEA generally accepts the MFBI's figures. Gross discrepancies are examined in more detail by FEA to determine the reasonableness of the differing estimates and to reconcile differences.

The elements of the three parts of the net operating cost differential are explained below:

1. *Capital investment costs.* The primary element in this part is the cost of equipment acquisition and refurbishment required for conversion to coal, including refurbishment or acquisition of pollution control equipment. In determining the estimated annual increase fixed costs to the owner resulting from such capital investment, FEA calculates the annual depreciation of equipment costs over the expected remaining useful service life of the MFBI (including consideration of the investment tax credit) and adds the estimated annual cost of capital.

Annual depreciation is calculated as follows: a. Determine cost of new equipment (including pollution control equipment) minus investment tax credit of 10 percent.

b. Divide the figure in a, above, by the expected remaining useful life of the MFBI after conversion is completed. FEA presumes that the MFBI's determination of remaining useful life is correct if it results in a total useful life of at least 40 years. Otherwise, FEA will conduct a more detailed examination of the MFBI.

Calculation of the approximate annual cost of capital is as follows:

a. New and refurbished equipment costs minus the investment tax credit, plus.

b. Twice the cost of land acquisitions required for conversions to coal burning.

c. The total of 1) and 2) is divided by 2 and then multiplied by a 10 percent interest rate.

2. *Operating and maintenance costs.* The primary factor considered in this calculation is the annual fuel cost differential which represents the difference between operating the MFBI with coal as its primary energy source in lieu of petroleum products or natural gas. (If the current supply of natural gas to the MFBI is curtailed, then the calculation of the fuel cost differential does not include natural gas as part of the MFBI's current fuel use to the extent of that curtailment. In such cases the NOCD was calculated on the basis of actual fuel usage). FEA has generally accepted the coal price reported by the MFBI's. If FEA considered the stated price to be unreasonable, it further examined coal prices based upon an analysis of delivered prices of coal in the area of the MFBI under consideration and an analysis of likely coal sources. Projected coal use after conversion was calculated by converting latest annual fuel use data to its BTU equivalent for coal.

Determination of the differential relating to labor costs and the differential relating to other operating and mainte-

nance costs was based upon estimates supplied by the MFBI's.

3. *Potential tax effects.* Federal and state tax rates have been applied to the net operating cost differential to determine maximum potential tax effects resulting from a Prohibition Order.

If the NOCD for an MFBI was positive, i.e., projects an increase in annual costs of operations, then a calculation of the cost per barrel of oil saved was performed by dividing the NOCD by the number of barrels of oil actually used on an annual basis (or, if the MFBI was a natural gas user, the number of barrels of oil which would be required to replace the gas use on an equivalent BTU basis). This figure (cost per barrel of oil saved) was then considered in terms of the number of barrels of oil and/or MCF of natural gas that would be saved by issuance of a Prohibition Order, the effect of the NOCD on the MFBI owner's operating expenses, as well as various environmental and other factors in reaching the final determination as to which candidates should receive an NOI.

It is to be noted that much of the information used by FEA to make its practicability findings is arguably confidential under 18 U.S.C. 1905. Therefore, such information has not appeared in the Appendix to the NOI. The calculations have been explained in each case and the data are available to the representatives of the owner of the MFBI.

Any questions regarding this Notice should be directed to the FEA National Office as follows: Federal Energy Administration, Code OCU (Prohibition Order: ---------- Installation), Washington, D.C. 20461 (202–566–7941).

(Energy Supply and Environmental Coordination Act of 1974 (15 U.S.C. 791 et seq.), as amended by Pub. L. 94–163; Federal Energy Administration Act of 1974 (15 U.S.C. 761 et seq.), as amended by Pub. L. 94–385; E.O. 11790 (39 FR 23185).)

Issued in Washington, D.C., May 9, 1977.

ERIC J. FYGI,
Acting General Counsel,
Federal Energy Administration.

APPENDIX A—PROPOSED FINDINGS AND RATIONALE FOR NOTICE OF INTENTION TO ISSUE A PROHIBITION ORDER

ESECA and the FEA regulations require FEA to make certain findings before issuing a Prohibition Order to major fuel burning installation (MFBI). FEA's proposed findings are set out below with respect to the MFBI's named below. Supporting rationale and conclusions are also set forth.

Docket No.	Owner	Installation	Unit No.	Location
OCU–0004	Brown Co., Specialty Papers Division.	Parchment plant----------	9, 10	Parchment, Mich.

These findings, which are now proposed by FEA, are based on the information that has been provided to and developed by FEA prior to the issuance of this Notice of Intention (NOI) to issue a Prohibition Order.

The Brown Company shall be referred to as the "owner" and as "Brown." Parchment Plant Units 9 and 10 shall be referred to as the "MFBI's" and as "Parchment 9 and 10."

I. CAPABILITY AND NECESSARY PLANT EQUIPMENT TO BURN COAL

FEA proposes to find that on June 22, 1974, Parchment 9 and 10 had the capability and necessary plant equipment to burn coal. This proposed finding is based on the facts and interpretations stated below:

A. Brown, in a Major Fuel Burning Installation Coal Conversion Report, Section II, Questions 6, and 12–14, (Form FEA C–602–S–0), filed on April 28, 1975, indicated that each MFBI had in place on June 22, 1974, a boiler that was capable of burning coal. The boilers had been designed and constructed or modified to burn coal as their primary energy source, notwithstanding the fact that on June 22, 1974, the MFBI's may not have been burning coal as their primary energy source.

B. Based on information Brown filed with FEA dated August 20, 1976, and other information available to FEA, the following plant equipment and facilities at Parchment 9 and 10 would have to be acquired or refurbished in order for these MFBI's to burn coal as their primary energy source: 1. Special instrumentation and controls; 2. Bunkers; 3. Unloaders and shakers; 4. Conveyors; 5. Ash handling and ponding equipment; 6. Burners; 7. Thawers; 8. Crushers; 9. Pulverizers; 10. Scales; 11. Pile handling equipment.

C. FEA proposes to find that on June 22, 1974, Parchment 9 and 10 had all other significant plant equipment and facilities associated with the burning of coal.

D. Within the meaning of ESECA and the regulations promulgated pursuant thereto, the equipment and facilities listed in paragraph B, above, do not individually or in combination constitute a lack of capability and necessary plant equipment to burn coal as of June 22, 1974.

II. THE BURNING OF COAL IN LIEU OF NATURAL GAS OR PETROLEUM PRODUCTS IS PRACTICABLE AND CONSISTENT WITH THE PURPOSES OF ESECA

FEA proposes to find that the burning of coal in lieu of petroleum products or natural gas at Parchment 9 and 10 is practicable and consistent with the purposes of ESECA. This proposed finding is based upon an analysis by FEA of the fuel consumption of these boilers for the period 1973–1976, the remaining useful service life of each boiler after conversion, the net operating cost differential that would result from compliance with a Prohibition Order, as well as the facts and interpretations referenced below:

A. *The burning of coal is practicable.*—1. *Anticipated fuel supplies.—Curtailment of natural gas supply.* Based on information obtained from the Federal Power Commission, the natural gas supplier, and in certain cases the owner, FEA presumes that these MFBI's will experience a substantial curtailment of their present supply of natural gas. This curtailment will result in increased reliance on alternate fuels in the future.

2. *Costs associated with burning coal.*—a. *Capital investment costs.* The total estimated initial capital investment costs, including financing costs, that would result from the acquisition and refurbishment of equipment and facilities associated with the burning of coal at Parchment 9 and 10 have been determined.

This determination was based on existing FEA information and analysis as well as information filed with FEA by the owner. Approximate costs to comply with applicable environmental protection requirements have also been considered, including the cost of compliance with the air pollution control requirements of the Clean Air Act.

b. *Annual operating and maintenance costs.* The expected increase in operating and maintenance costs, exclusive of fuel costs, that would result from the burning of coal has been calculated based on information supplied by the owner or otherwise acquired by FEA.

c. *Fuel costs.* Based on an analysis of annual fuel consumption and fuel cost information supplied by the owner and/or, in appropriate circumstances, upon FEA's fuel cost estimates, FEA has determined that the burning of coal in lieu of natural gas or petroleum products at Parchment 9 and 10 will result in a decrease in annual fuel costs.

d. *Net operating cost differential.* Based on the factors stated in paragraphs A.1.-a.–c., above, as well as the expected remaining useful life of the boilers after conversion, FEA has determined that the net annual operating cost differential, hereafter "NOCD", (which represents the difference between operating the boilers with coal and alternate fuel(s) as their primary energy source), resulting from the conversion of Parchment 9 and 10, will represent an annual savings.

3. *Reasonableness of additional costs of burning coal.* The following analysis of the costs of conversion provides the basis for deciding that compliance with the proposed order is not unreasonable.

By converting from burning natural gas to burning coal as the primary energy source these MFBI's would experience a net annual operating cost increase, but would save a substantial amount of natural gas. This cost would only be incurred for a limited period because these MFBI's will eventually experience a substantial curtailment of their supply of natural gas. If the prohibition order were not issued to these MFBI's they could alternately replace their current natural gas supply with either petroleum products or coal for the period following such substantial curtailment of their natural gas supply.

In the calculation of the NOCD, FEA has considered oil as a substitute fuel for curtailed natural gas. In calculating the NOCD, in those instances where the MFBI has experienced no curtailment of its natural gas supply, FEA considered the present fuel usage. The net annual operating cost differential for these MFBI's resulting from operating on coal as their primary energy source, instead of petroleum products (and/or natural gas where applicable), will represent an annual savings.

Since the use of the coal alternative, instead of petroleum products, could be expected to result in a net cost savings, FEA has determined that the prohibition against burning natural gas or petroleum products as the primary energy source at these MFBI's is not unreasonable.

The additional costs that would be incurred from prohibiting the burning of natural gas as the primary energy source at these MFBI's would only be incurred for a limited period of time. In view of the scarcity of national supplies of natural gas and the likelihood that Parchment 9 and 10 will

experience a substantial curtailment of their present supply of natural gas in the future, FEA has determined that the cost of burning coal in lieu of natural gas is not unreasonable. (Final Report Oil and Gas Resources, Reserves, and Productive Capacities Volumes I and II, Federal Energy Administration, October 1975.) This determination is further supported by consideration of the savings that would result from the burning of coal in lieu of potential alternate petroleum products for the period after which the natural gas supply to Parchment 9 and 10 would be substantially curtailed.

4. *Financial capability of the owner.*—a. *Recovery of capital investment.* FEA proposes to find that compliance with a Prohibition Order by Parchment 9 and 10 would be economically feasible. FEA's analysis took into consideration the financial capability of the owner and is based upon the owner's financial position as reported in the Dun and Bradstreet Reference Book (March 1977). Where necessary, FEA performed an independent analysis of the owner's financial capability, considering such factors as the owner's current financial statement and the additional capital investment required for the owner to comply with this NOI and all other NOI's which are currently under consideration, as well as additional capital investment costs related to all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2 (a) and (c) of ESECA to MFBI's owned by Brown. FEA related these additional capital investment costs to the total capitalization of Brown and the remaining useful life after conversion of Parchment 9 and 10.

FEA does not consider the effect of the added capital investment costs to represent an unreasonable burden given the financial capabilities of Brown to assume such costs.

b. *Total annual costs associated with conversion.* The total estimated annual increase in costs (amortized increased capital investment costs and other costs, exclusive of fuel costs) associated with the burning of coal as opposed to oil and natural gas attributable to compliance with this NOI and all other NOI's which are currently under consideration has been determined. FEA also took into consideration total annual costs resulting from compliance with all Other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2 (a) and (c) of ESECA to Brown MFBI's.

However, due to the potential offsetting value of fuel cost savings attributable to compliance with this NOI and all other NOI's currently under consideration, Brown's total annual costs after conversion should decrease.

B. *Consistency with the purposes of ESECA.* Because the issuance of a Prohibition Order to Parchment 9 and 10 will discourage the use of natural gas or petroleum products and encourage the increased use of coal, FEA proposes to conclude that this action would be consistent with the purpose of ESECA to provide a means to assist in meeting the essential needs of the United States for fuels.

On the basis of the environmental analysis which FEA is required to conduct prior to issuance of a Notice of Effectiveness of a Prohibition Order, as well as the necessity for these MFBI's to comply with the Clean Air Act and other applicable environmental protection requirements, FEA proposes to conclude that a Prohibition Order to Parchment 9 and 10 would be consistent with the purpose of ESECA to provide for a means to assist in meeting the essential needs of the United States for fuels in a manner which is consistent, to the fullest extent practicable, with existing national commitments to protect and improve the environment.

III. COAL AND COAL TRANSPORTATION FACILITIES WILL BE AVAILABLE TO THESE MFBI'S DURING THE PERIOD UNTIL DECEMBER 31, 1984

A. *Coal availability.*—1. *National coal reserves.* United States coal reserves are more than sufficient to supply national needs for the foreseeable future. U.S. Department of the Interior, Bureau of Mines (BOM) data show a demonstrated coal reserve base of over 400 billion tons, over half of which is currently technically and economically recoverable (Demonstrated Coal Reserve Base of the United States, by Sulfur Category, on January 1, 1974, Bureau of Mines (May 1975) (hereafter "BOM Survey")). Within these recoverable reserves approximately 200 billion tons contain 1% or less sulfur by weight. To determine when certain quantities of these reserves are expected to be available, FEA has examined several studies referenced herein, which together provide the best current evidence as to coal availability for the period ending December 31, 1984.

2. *National coal production and demand.* The comparison, stated below, of estimated national coal production, national coal demand, and the total tonnage of uncommitted planned national coal production (derived from responses to a survey of coal producing companies) shows that there should be sufficient production of coal to meet the total national demand through 1980. Beyond 1980, plans for new production are not yet fully developed because few coal producers have firm expansion plans that extend that far into the future; however, the projected total planned national coal production for 1985 already meets 99% of the total U.S. demand expected in 1985. With time, more potential mine developments will become firm plans, thus increasing the planned production.

a. *National coal production.* It is conservatively estimated that it will be practicable to produce coal nationally in at least the following quantities:

Year:	*Production Potential (million tons)*
1977	732.3
1978	791.6
1979	851.4
1980	911.7
1981	960.0
1982	994.3
1983	1,017.4
1984	1,028.7
1985	1,029.6

The figures shown above are derived from FEA's Coal Mine Expansion Study (May 1976). This study demonstrates that most coal producers did not have firm or accurate plans for new capacity additions beyond 1980. The 1985 projection, therefore, tends to underestimate actual production potential.

An FEA study, Coal Availability Report, April 1977, (hereafter "Availability Report"), indicates current plans for nationwide production of uncommitted coal as follows:

Year:	*Production (million tons)*
1978	124.3
1979	243.1
1980	293.3
1981	350.0
1982	369.9
1983	396.2
1984	475.5
1985	544.9

b. *National demand exclusive of ESECA prohibition order demand.* The estimated national demand, excluding any increased demand resulting from FEA action under the authority of Section 2(a) of ESECA, is as follows (FEA 1976 National Energy Outlook):

Year:	*Demand (million tons)*
1978	730
1979	764
1980	799
1981	842
1982	887
1983	935
1984	985
1985	1,040

c. *National ESECA prohibition order demand.* The estimated potential demand for coal resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA is no more than the following ("Availability Report"):

Year:	*Demand (million tons)*
1978	11.0
1979	22.4
1980	32.5
1981	35.8
1982	57.4
1983	59.8
1984	59.8

3. *Characteristic coal production and demand.* FEA's "Availability Report" identifies coal of specific quality characteristics available for use at these MFBI's. The survey is based on data from 31 mining companies that supplied useful information on 96 mining units. Responses from these companies identified planned production of coal which is not now committed to a specific buyer. For those companies which did not respond to the survey, FEA estimated their uncommitted planned production based on their 1974 production.

a. *Characteristic coal requirements for these MFBI's.* FEA's "Availability Report" has determined that boilers of the type used at Parchment 9 and 10 will be able to burn coal of the following characteristics and comply with all applicable air pollution control requirements.

Btu's/lb	[1] 10,700
Moisture (percent)	[2] 15
Ash (percent)	[2] 20
Volatile (percent)	[2] 15
Ash softening temperature (°F)	[1] 2,200
Sulfur (approximately) (percent)	[2] 1.5

[1] Minimum.
[2] Maximum.

b. *Characteristic coal demands from these MFBI's.* The potential demand for coal, of the type described above, which would result from this NOI is estimated to be as follows:

Year:	*Demand (thousand tons)*
1980 and thereafter	130

c. *National planned production, characteristic coal.* FEA's "Availability Report" has determined that coal of the type described in paragraph A.3.a., above, is uncommitted to a specific buyer and will be potentially available to these MFBI's in a nationwide market as follows:

Year:	*Production (thousand tons)*
1978	67,937
1979	127,138
1980	158,932
1981	189,316
1982	200,259

Year:	Production (thousand tons)
1983	214,838
1984	253,700

d. *National ESECA prohibition order demand for coal, regardless of characteristics.* The national planned production of characteristic coal, as stated in paragraph A.3.c., above, exceeds potential demand for coal regardless of characteristic expected from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. National ESECA Prohibition Order demand as previously stated in paragraph A.2.c., above is no more than the following ("Availability Report"):

Year:	Demand (thousand tons)
1978	11,032
1979	22,434
1980	32,483
1981	35,755
1982	57,362
1983	59,815
1984	59,815

e. *Regional planned production, characteristic coal.* Coal with the characteristics described in paragraph A.3.a., above, is uncommitted and will be potentially available to these MFBI's (in a probable regional supply/demand relationship related to the location of these MFBI's) from BOM Districts 7, 8 and 13 as follows ("Availability Report"):

Year:	Production (thousand tons)
1978	26,032
1979	47,383
1980	53,082
1981	61,661
1982	65,354
1983	70,552
1984	80,964

f. *Regional ESECA prohibition order demand for coal, regardless of characteristic.* The expected regional production of characteristic coal, as stated in paragraph A.3.e., above, exceeds the potential demand for coal regardless of characteristic from BOM Districts 7, 8 and 13 expected to result from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. This potential regional demand is estimated in FEA's "Availability Report" to be no more than the following:

Year:	Demand (thousand tons)
1978	3,268
1979	9,149
1980	16,321
1981	18,005
1982	23,682
1983	24,095
1984	24,095

g. *Regional ESECA prohibition order demand for coal by sulfur characteristic.* The potential regional demand for coal from BOM Districts 7, 8 and 13 with a 1.41–1.8 percent sulfur content (which includes the 1.5 percent maximum sulfur content described in paragraph A.3.a., above) resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA is estimated in FEA's "Availability Report" to be no more than the following:

Year:	Demand (thousand tons) percent sulfur 1.41 to 1.8
1978	226
1979	897
1980	1,773
1981	1,773
1982	1,773
1983	1,773
1984	1,773

The regional planned production of coal stated in paragraph A.3.e., above, with the characteristics described in paragraph A.3.a., above far exceeds this potential ESECA regional demand for coal by sulfur characteristic.

4. *State or local laws.* FEA has found no state or local laws or policies limiting the extraction or utilization of coal that would adversely affect these production figures, and none have been brought to FEA's attention.

5. *Conclusion.* FEA's "Availability Report" has identified nationally and in BOM Districts 7, 8 and 13 uncommitted coal production that meets the requirements of Parchment 9 and 10 as described in paragraph A.3.a., above. FEA proposes to find that this uncommitted coal exists in amounts sufficient in any year to meet the estimated additional demand for coal, both nationally and from these Districts, resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA.

Coal for these MFBI's will probably be bought from producers according to regional supply/demand relationships related to the MFBI's location from BOM Districts 7, 8 and 13. FEA observes, however, that the MFBI's could purchase coal in other markets as such production becomes available. (*The Feasibility of Considering Expanded Use of Western Coal by Midwestern and Eastern Utilities in the Period 1978 and Beyond*, School of Engineering, University of Pennsylvania, November 7, 1975.)

B. *Coal transportation.*

1. *Location of MFBI's and coal supply.* Based on an FEA study, *Coal Transportation Availability Report*, April 1977, (hereafter "Transportation Availability Report"), coal for Parchment 9 and 10 would probably come from BOM District 8 as the primary supply area and from BOM District 2 as the alternate supply area. While these supply regions are among the nearest available sources able to supply complying coal to the plant, complying coal could be transferred by rail from other identified sources within the United States as well. The analysis of transportation availability is based on the most likely route as well as two alternate routes. These routes were chosen to demonstrate transportation availability.

2. *Route of coal shipment.* The primary route for coal delivery in Parchment 9 & 10 is to originate coal in BOM District 8 near Wayland, Kentucky, on the Chesapeake and Ohio (Chessie System). The Chessie System would move it via Ashland, Kentucky, Columbus and Toledo, Ohio, to Wayne, Michigan, where Consolidated Railroad Corporation (Conrail) picks up and delivers the coal to Parchment 9 and 10. The total rail distance is about 610 miles.

The alternate route from the primary supply area originates coal in BOM District 8 near Hazard, Kentucky, on the Louisville and Nashville (L&N) which moves it to Cincinnati, Ohio, where Conrail would pick up and deliver the coal Parchment 9 and 10. The total rail distance is about 530 miles.

An alternate route from the alternate supply area would originate coal in BOM District 2 near Pittsburgh, Pennsylvania, on Conrail which would deliver the coal to Parchment 9 and 10. The total rail distance is about 520 miles.

3. *Originating trunk carrier.* The Chessie System, the originating carrier of coal for Parchment 9 & 10 has approximately 75,000 hopper cars in service and plans to add 5,000 more in the near future. Using an average number of 20 deliveries per year per 75-ton car, the Chessie System may need as many as 130 additional cars to handle the increased demand from Parchment 9 and 10. This estimate assumes that the railroad would neither have excess originating capacity nor obtain cars from other carriers in the originating vicinity.

FEA's "Transportation Availability Report" concluded that for all potential Prohibition Order candidates studied, there would be no major constraints in transporting coal. This study examined existing rail transportation car capacity, water transportation capacity, including unloading docks, where applicable, and took into account projections made by all carriers to meet the anticapted demand for all types of transportation facilities assuming all MFBI's studied were to receive orders under Section 2(a) of ESECA.

FEA has not found nor has it been informed of any apparent constraints to carrying coal for any originating, alternate or intermediate carriers should they be used.

4. *Destination carrier and plant facilities.* Freight service to Parchment 9 and 10 is provided by Conrail as illustrated above. Parchment 9 and 10 has indicated that coal has been used in the past and has been delivered by Conrail.

There are no obstacles to the delivery of coal to Parchment 9 and 10.

5. *Conclusion.* Coal transportation facilities will be available for the period a Prohibition Order is expected to be in effect since no major constraints to coal delivery over the primary route to Parchment 9 and 10 presently exist, and alternate routes are available.

Appendix B—Proposed Findings and Rationale for Notice of Intention to Issue a Prohibition Order

ESECA and the FEA regulations require FEA to make certain findings before issuing a Prohibition Order to a major fuel burning installation (MFBI). FEA's proposed findings are set out below with respect to the MFBI's named below. Supporting rationale and conclusions are also set forth.

Docket No.	Owner	Installation	Unit No.	Location
OCU-1356	A. E. Staley Manufacturing Co.	Decatur plant	19, 20, 21	Decatur, Ill.

These findings, which are now proposed by FEA, are based on the information that has been provided to and developed by FEA prior to the issuance of this Notice of Intention (NOI) to issue a Prohibition Order.

A. E. Staley Manufacturing Company shall be referred to as the "owner" and as "Staley". Decatur Plant Units 19, 20, and 21 shall be referred to as the "MFBI's" and as "Decatur 19, 20 and 21."

I. CAPABILITY AND NECESSARY PLANT EQUIPMENT TO BURN COAL

FEA proposes to find that on June 22, 1974, Decatur 19, 20 and 21 had the capability and necessary plant equipment to burn coal. This proposed finding is based on the facts and interpretations stated below:

A. Staley, in a Major Fuel Burning Installation Coal Conversion Report, Section II, Questions 6, and 12–14, (Form FEA C–602–S–0), filed on May 21, 1975, indicated that each MFBI had in place on June 22, 1974, a boiler that was capable of burning coal. The boilers had been designed and constructed or modified to burn coal as their primary energy source, notwithstanding the fact that on June 22, 1974, the MFBI's may not have been burning coal as their primary energy source.

B. Based on information Staley filed with FEA dated July 22, 1976, and other information available to FEA, the following plant equipment and facilities at Decatur 19, 20 and 21 would have to be acquired or refurbished in order for these MFBI's to burn coal as their primary energy source.

1. Scales.
2. Feeders.
3. Air heaters.
4. Combustors.
5. Soot blowers.
6. Special instrumentation and controls.
7. Ash handling and ponding equipment.
8. Unloaders.
9. Conveyors.
10. Crushers.
11. Stokers.

C. FEA proposes to find that on June 22, 1974, Decatur 19, 20 and 21 had all other significant plant equipment and facilities associated with the burning of coal.

D. Within the meaning of ESECA and the regulations promulgated pursuant thereto, the equipment and facilities listed in paragraph B, above, do not individually or in combination constitute a lack of capability and necessary plant equipment to burn coal as of June 22, 1974.

II. THE BURNING OF COAL IN LIEU OF NATURAL GAS OR PETROLEUM PRODUCTS IS PRACTICABLE AND CONSISTENT WITH THE PURPOSES OF ESECA.

FEA proposes to find that the burning of coal in lieu of petroleum products or natural gas at Decatur 19, 20 and 21 is practicable and consistent with the purposes of ESECA. This proposed finding is based upon an analysis by FEA of the fuel consumption of these boilers for the period 1973–1977, the remaining useful service life of each boiler after conversion, the net operating cost differential that would result from compliance with a Prohibition Order, as well as the facts and interpretations referenced below:

A. *The burning of coal is practicable.*

1. *Anticipated fuel supplies.—Curtailment of natural gas supply.* Based on information obtained from the Federal Power Commission, the natural gas supplier, and in certain cases the owner, FEA presumes that these MFBI's will experience a substantial curtailment of their present supply of natural gas. This curtailment will result in increased reliance on alternate fuels in the future.

2. *Costs associated with burning coal.*

a. *Capital investment costs.* The total estimated initial capital investment costs, including financing costs, that would result from the acquisition and refurbishment of equipment and facilities associated with the burning of coal at Decatur 19, 20, and 21 have been determined.

This determination was based on existing FEA information and analysis as well as information filed with FEA by the owner. Approximate costs to comply with applicable environmental protection requirements have also been considered, including the cost of compliance with the air pollution control requirements of the Clean Air Act.

b. *Annual operating and maintenance costs.* The expected increase in operating and maintenance costs, exclusive of fuel costs, that would result from the burning of coal has been calculated based on information supplied by the owner or otherwise acquired by FEA.

c. *Fuel costs.* Based on an analysis of annual fuel consumption and fuel cost information supplied by the owner and/or, in appropriate circumstances, upon FEA's fuel cost estimates, FEA has determined that the burning of coal in lieu of natural gas or petroleum products at Decatur 19, 20 and 21 will result in a decrease in annual fuel costs.

d. *Net operating cost differential.* Based on the factors stated in paragraphs A.1.a.–c, above, as well as the expected remaining useful life of the boilers after conversion, FEA has determined that the net annual operating cost differential, hereafter "NOCD", (which represents the difference between operating the boilers with coal and alternate fuel(s) as its primary energy source), resulting from the conversion of Decatur 19, 20 and 21 will represent an annual cost increase of $228,024.

3. *Reasonableness of additional costs of burning coal.* The following analysis of the costs of conversion provides the basis for deciding that compliance with the proposed order is not unreasonable.

By converting from burning natural gas to burning coal as their primary energy source these MFBI's would experience a net annual operating cost increase, but would save a substantial amount of natural gas. This cost would only be incurred for a limited period because these MFBI's will eventually experience a substantial curtailment of their supply of natural gas. If the prohibition order were not issued to these MFBI's they could alternately replace their current natural gas supply with either petroleum products or coal for the period following such substantial curtailment of their natural gas supply.

In the calculation of the NOCD, FEA has considered oil as a substitute fuel for curtailed natural gas. In calculating the NOCD, in those instances where the MFBI has experienced no curtailment of its natural gas supply, FEA considered the present fuel usage. The net annual operating cost increase for these MFBI's resulting from operating on coal as their primary energy source, instead of petroleum products (and/or natural gas where applicable), will be approximately $624,886.

Although the use of the coal alternative, instead of potential petroleum products, could be expected to result in a net annual operating cost increase, FEA has determined that the prohibition of burning natural gas of petroleum products as the primary energy source at Decatur 19 20 and 21 is not unreasonable.

Burning of coal by these MFBI's as their primary energy source instead of petroleum products would result in additional capital investment costs and annual operating and maintenance costs exclusive of fuel costs. Any additional conversion costs would, however, be mitigated by the savings in fuel costs inherent in burning coal. Notwithstanding the fact that these MFB's could experience annual savings in its total fuel cost should it convert to coal instead of converting to petroleum products, there would be a net increase in the costs to these MFBI's.

Although conversion to the burning of coal instead of petroleum products would be expected to increase the costs incurred by Decatur 19, 20 and 21 by $624,886 per year, FEA proposes to find that such increased cost, per barrel of oil saved is not unreasonable given the purposes of ESECA. This determination is based on consideration of the substantial potential oil savings that would result from conversion to coal. The determination that the costs of burning coal instead of petroleum products would not be unreasonable in further supported by consideration of such costs in relation to the expected remaining useful life of these MFBI's, the size and resources of the owner as examined in the following discussion of financial capability, and the nature of the expected operations of these MFBI's.

4. *Financial capability of the owner.*

a. *Recovery of capital investment.* FEA proposes to find that compliance with a Prohibition Order by Decatur 19, 20 and 21 would be economically feasible. FEA's analysis took into consideration the financial capability of the owner and is based upon the owner's financial position as reported in the *Dun and Bradstreet Reference Book* (March 1977). Where necessary, FEA performed an independent analysis of the owner's financial capability, considering such factors as the owner's current financial statement and the additional capital investment required for the owner to comply with this NOI and all other NOI's which are currently under consideration, as well as additional capital investment costs related to all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2 (a) and (c) of ESECA to MFBI's owned by Staley. FEA related these additional capital investment costs to the total capitalization of Staley and the remaining useful life after conversion of Decatur 19, 20 and 21. FEA does not consider the effect of the added capital investment costs to represent an unreasonable burden given the financial capabilities of Staley to assume such costs.

b. *Total annual costs associated with conversion.* The total estimated annual increase in costs (amortized increased capital investment costs and other costs, exclusive of costs) associated with the burning of coal as opposed to natural gas attributable to compliance with this NOI and all other NOI's which are currently under consideration has been determined. FEA also took into consideration total annual costs resulting from compliance with all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2 (a) and (c) of ESECA to Staley MFBI's.

Notwithstanding the potential offsetting value of fuel lost savings attributable to compliance with this NOI and all other NOI's currently under consideration; Staley's total annual costs after conversion will increase by $624,886.

B. *Consistency with the purposes of ESECA.* Because the issuance of a Prohibition Order to Decatur 19, 20 and 21 will discourage the use of natural gas or petroleum products and encourage the increased use of coal, FEA proposes to conclude that this action would be consistent with the purpose of ESECA to provide a means to assist in meeting the essential needs of the United States for fuels.

On the basis of the environmental analysis which FEA is required to conduct prior to issuance of a Notice of Effectiveness of a Prohibition Order, as well as the necessity for this MFBI to comply with the Clean Air Act and other applicable environmental protection requirements, FEA proposes to conclude that a Prohibition Order to Decatur

19, 20 and 21 would be consistent with the purpose of ESECA to provide for a means to assist in meeting the essential needs of the United States for fuels in a manner which is consistent, to the fullest extent practicable, with existing national commitments to protect and improve the environment.

III. COAL AND COAL TRANSPORTATION FACILITIES WILL BE AVAILABLE TO THESE MFBI's DURING THE PERIOD UNTIL DECEMBER 31, 1984

A. *Coal availability.*

1. *National coal reserves.* United States coal reserves are more than sufficient to supply national needs for the foreseeable future. U.S. Department of the Interior, Bureau of Mines (BOM) data show a demonstrated coal reserve base of over 400 billion tons, over half of which is currently technically and economically recoverable (*Demonstrated Coal Reserve Base of the United States, by Sulfur Category, on January 1, 1974*, Bureau of Mines (May 1975) [hereafter "BOM Survey"]). Within these recoverable reserves approximately 200 billion tons contain 1% or less sulfur by weight. To determine when certain quantities of these reserves are expected to be available, FEA has examined several studies referenced herein, which together provide the best current evidence as to coal availability for the period ending December 31, 1984.

2. *National coal production and demand.* The comparison, stated below, of estimated national coal production, national coal demand, and the total tonnage of uncommitted planned national coal production (derived from responses to a survey of coal producing companies) shows that there should be sufficient production of coal to meet the total national demand through 1980. Beyond 1980, plans for new production are not yet fully developed because few coal producers have firm expansion plans that extend that far into the future; however, the projected total planned national coal production for 1985 already meets 99% of the total U.S. demand expected in 1985. With time, more potential mine development will become firm plans, thus increasing the planned production.

a. *National coal production.* It is conservatively estimated that it will be practicable to produce coal nationally in at least the following quantities:

Year:	*Production potential (million tons)*
1977	732.3
1978	791.6
1979	851.4
1980	911.7
1981	960.0
1982	994.3
1983	1,017.4
1984	1,028.7
1985	1,029.6

The figures shown above are derived from FEA's *Coal Mine Expansion Study* (May 1976). This study demonstrates that most coal producers did not have firm or accurate plans for new capacity additions beyond 1980. The 1985 projection, therefore, tends to underestimate actual production potential.

An FEA study, *Coal Availability Report*, April 1977, (hereafter "Availability Report"), indicates current plans for nationwide production of uncommitted coal as follows:

Year:	*Production (million tons)*
1978	124.3
1979	243.1
1980	293.3
1981	350.0
1982	369.9
1983	396.2
1984	475.5
1985	544.9

b. *National demand exclusive of ESECA prohibition order demand.* The estimated national demand, excluding any increased demand resulting from FEA action under the authority of Section 2(a) of ESECA, is as follows (*FEA 1976 National Energy Outlook*):

Year:	*Demand (million tons)*
1978	730
1979	764
1980	799
1981	842
1982	887
1983	935
1984	985
1985	1,040

c. *National ESECA prohibition order demand.* The estimated potential demand for coal resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA is no more than the following ("Availability Report"):

Year:	*Demand (million tons)*
1978	11.0
1979	22.4
1980	32.5
1981	35.8
1982	57.4
1983	59.8

3. *Characteristic coal production and demand. FEA's* "Availability Report" identifies coal of specific quality characteristics available for use at these MFBI's. The survey is based on data from 31 mining companies that supplied useful information on 96 mining units. Response from those companies identified planned production of coal which is not now committed to specific buyer. For those companies which did not respond to the survey, FEA estimated their uncommitted planned production based on their 1974 production.

a. *Characteristic coal requirements for these MFBI's.* FEA's "Availability Report" has determined that boilers of the types used at Decatur 19, 20 and 21 will be able to burn coal of the following characteristics and comply with all applicable air pollution control requirements.

Btu's per lb (minimum)	10,000
Moisture (percent maximum)	15
Ash (percent maximum)	20
Volatile (percent minimum)	15
Ash softening temperature (degrees fahrenheit, minimum)	1,900
Sulfur (percent maximum, approximate)	1.08

b. *Characteristic coal demand from these MFBI's.* The potential demand for coal, of the type described above, which would result from this NOI is estimated to be as follows:

Year:	*Demand (thousand tons)*
1979 and thereafter	211

c. *National planned production, characteristic coal.* FEA's "Availability Report" has determined that coal of the type described in paragraph A.3.a., above, is uncommitted to a specific buyer and will be potentially available to these MFBI's in a nationwide market as follows:

Year:	*Production (thousand tons)*
1978	61,390
1979	112,998
1980	141,696
1981	169,688
1982	179,742
1983	193,201
1984	228,474

d. *National ESECA prohibition order demand for coal, regardless of characteristics.* The national planned production of characteristic coal, as stated in paragraph A.3.c., above, exceeds potential demand for coal regardless of characteristic expected from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. National ESECA Prohibition Order demand as previously stated in paragraph A.2.c., above, is no more than the following ("Availability Report"):

Year:	*Demand (thousand tons)*
1978	11,032
1979	22,434
1980	32,483
1981	35,755
1982	57,362
1983	59,815
1984	59,815

e. *Regional planned production, characteristic coal.* Coal with the characteristics described in paragraph A.3.a., above, is uncommitted and will be potentially available to these MFBI's (in a probable regional supply/demand relationship related to the location of the MFBI's from BOM Districts 7, 8 and 13 as follows ("Availability Report"):

Year:	*Production (thousand tons)*
1978	23,720
1979	41,682
1980	46,902
1981	54,781
1982	58,159
1983	62,984
1984	73,417

f. *Regional ESECA prohibition order demand for coal, regardless of characteristic.* The expected regional production of characteristic coal, as stated in paragraph A.3.e., above, exceeds the potential demand for coal regardless of characteristic from BOM Districts 7, 8 and 13 expected to result from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. This potential regional demand is estimated in FEA's "Availability Report" to be no more than the following:

Year:	*Demand (thousand tons)*
1979	3,268
1979	9,140
1980	16,321

Year:	Demand (thousand tons)
1981	18,005
1982	23,682
1983	24,095
1984	24,095

g. *Regional ESECA prohibition order demand for coal by sulfur characteristic.* The potential regional demand for coal from BOM Districts 7, 8 and 13 with a 0.61 to 1.4 percent sulfur content (which includes the 1.08 percent maximum sulfur content described in paragraph A.3.a., above) resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under the authority of Section 2(a) of ESECA is estimated in FEA's "Availability Report" to be no more than the following:

Year:	Demand (thousand tons) Percent Sulfur 0.61 to 1.4
1978	2,831
1979	5,825
1980	10,484
1981	11,673
1982	16,937
1983	16,937
1984	16,937

The regional planned production of coal stated in paragraph A.3.e., above, with the characteristics described in paragraph A.3.a., above, far exceeds this potential ESECA regional demand for coal by sulfur characteristic.

4. *State or local laws.* FEA has found no state or local laws or policies limiting the extraction or utilization of coal that would adversely affect these production figures, and none have been brought to FEA's attention.

5. *Conclusion.* FEA's "Availability Study" has identified nationally and in BOM Districts 7, 8 and 13 uncommitted coal production that meets the requirements of Decatur 19, 20 and 21 as described in paragraph A.3.a., above. FEA proposes to find that this uncommitted coal exists in amounts sufficient in any year to meet the estimated additional demand for coal, both nationally and from these Ditsricts, resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA.

Coal for these MFBI's will probably be bought from producers according to regional supply/demand relationships related to the MFBI's location from BOM Districts 7, 8 and 13. FEA observes, however, that these MFBI's could purchase coal in other markets as such production becomes available. (Feasibility of Considering Expanded Use of Western Coal by Midwestern and Eastern Utilities in the Period 1978 and Beyond, School of Engineering, University of Pennsylvania, November 7, 1975.)

B. *Coal transportation.*

1. *Location of MFBI's and coal supply.* Based on an FEA Study, Coal Transportation Availability Report, April 1977, (hereafter "Transportation Availability Report"), coal for the Decatur Plant would probably come from BOM District 8 as the primary supply area and from BOM District 11 as the alternate supply area. While these supply regions are among the nearest available sources able to supply complying coal to the plant, complying coal could be transferred by rail from other identified sources within the United States as well. The analysis of transportation availability is based on the most likely route as well as two alternate routes. These routes were chosen to demonstrate transportation availability.

2. *Route of coal shipment.* The primary route for coal delivery for Decatur 19, 20 and 21 is to originate coal in BOM District 8 near Hazard, Kentucky on the Louisville and Nashville Railroad (L&N). The L&N would move it via Louisville, Kentucky and Rerra Nourte, Indiana.

The total rail distances is about 568 miles.

The alternate route from the primary supply area originates coal in BOM District 8 area Hazard, Kentucky on the L&N which would haul it via Louisville, Kentucky to Bloomington, Indiana where the Illinois Central Gulf Railroad (ICG) would pick it up and carry via west to Newton, Illinois for delivery to Decatur 19, 20 and 21. The total rail distance is about 518 miles.

An alternate route from the alternate supply area would originate coal in BOM District 11 near Vincennes, Indiana on the Baltimore and Ohio line (Chessie System) which would move it to Olney, Illinois, where ICG picks up and delivers the coal to Decatur 19, 20 and 21. The total rail distance is about 136 miles.

3. *Originating trunk carrier.* The L&N, originating carrier of coal for Decatur 19, 20 and 21 has over 34,000 hopper cars in service and has been increasing this number by about 2,000 cars per year. Using an average number of 20 deliveries per year per 75-ton car, the L&N may need as many as 165 additional cars to handle the increased demand from Decatur 19, 20, and 21. This estimate assumes that the railroad would neither have excess originating capacity nor obtain cars from other carriers in the originating vicinity.

FEA's "Transportation Availability Report" concluded that for all potential Prohibition Order candidates studied, there would be no major constraints in transporting coal. This study examined existing rail transportation car capacity, water transportation capacity, including unloading docks, where applicable, and took into account projections made by all types of transportation facilities assuming all MFBI's studied were to receive orders under Section 2(a) of ESECA.

The L&N indicated that transportation facilities at those mine sites within BOM District 8 served by the L&N are in good condition and that loading facilities could handle the required coal volumes.

FEA has not found nor has it been informed of any apparent constraints to carrying coal for any alternate or intermediate carriers should they be used.

4. *Destination carrier and MFBI facilities.* The destination carrier of coal from the primary supply area is N&W which, Staley indicated, has delivered coal to Decatur 19, 20 and 21 in the past.

There are no other obstacles to the delivery of coal to Decatur 19, 20, and 21.

5. *Conclusion.* Coal transportation facilities will be available for the period a Prohibition Order is expected to be in effect since no major constraints to coal delivery over the primary route to Decatur 19, 20 and 21 presently exist, and alternate routes are available.

APPENDIX C—PROPOSED FINDINGS AND RATIONALE FOR NOTICE OF INTENTION TO ISSUE A PROHIBITION ORDER

ESECA and the FEA regulations require FEA to make certain findings before issuing a Prohibition Order to a major fuel burning installation (MFBI). FEA's proposed findings are set out below with respect to the MFBI's named below. Supporting rationale and conclusions are also set forth.

Docket No.	Owner	Installation	Unit No.	Location
OCU-1853	Marathon Oil Co.	Robinson refinery	9,10	Robinson, Ill.

These findings, which are now proposed by FEA, are based on the information that has been provided to and developed by FEA prior to the issuance of this Notice of Intention (NOI) to issue a Prohibition Order.

Marathon Oil Company shall be referred to as the "owner" and as "Marathon". Robinson Refinery Units 9 and 10 shall be referred to as the "MFBI's" and as "Robinson 9 and 10".

I. CAPABILITY AND NECESSARY PLANT EQUIPMENT TO BURN COAL

FEA proposes to find that on June 22, 1974, Robinson 9 and 10 had the capability and necessary plant equipment to burn coal. This proposed finding is based on the facts and interpretations stated below:

A. Marathon, in a Major Fuel Burning Installation Coal Conversion Report, Section II, Questions 6, and 12–14, (Form FEA C–602–S–0), filed on May 21, 1975, indicated that each MFBI had in place on June 22, 1974, a boiler that was capable of burning coal. The boilers had been designed and constructed or modified to burn coal as their primary energy source, notwithstanding the fact that on June 22, 1974, the MFBI's may not have been burning coal as their primary energy source.

B. Based on information Marathon filed with FEA dated July 23, 1976, and other information available to FEA, the following plant equipment and facilities at Robinson 9 and 10 would have to be acquired or refurbished in order for these MFBI's to burn coal as their primary energy source:

1. Unloaders
2. Crushers
3. Conveyors
4. Pulverizers
5. Feeders
6. Air heaters
7. Combustors
8. Soot blowers
9. Special instrumentation and controls
10. Ash handling and ponding equipment
11. Electric switch gear

C. FEA proposes to find that on June 22, 1974, Robinson 9 and 10 had all other significant plant equipment and facilities associated with the burning of coal.

D. Within the meaning of ESECA and the regulations promulgated pursuant thereto, the equipment and facilities listed in paragraph B, above, do not individually or in combination constitute a lack of capability and necessary plant equipment to burn coal as of June 22, 1974.

II. The burning of coal in lieu of natural gas or petroleum products is practicable and consistent with the purposes of ESECA.

FEA proposes to find that the burning of coal in lieu of petroleum products or natural gas at Robinson 9 and 10 is practicable and consistent with the purposes of ESECA. This proposed finding is based upon an analysis by FEA of the fuel consumption of these boilers for the period 1973–1977, the remaining useful service life of each boiler after conversion, the net operating cost differential that would result from compliance with a Prohibition Order, as well as the facts and interpretations referenced below:

A. *The burning of coal is practicable.*
1. *Costs associated with burning coal.*—a. *Capital investment costs.* The total estimated initial capital investment costs, including financing costs, that would result

from the acquisition and refurbishment of equipment and facilities associated with the burning of coal at Robinson 9 and 10 have been determined.

This determination was based on existing FEA information and analysis as well as information filed with FEA by the owner. Approximate costs to comply with applicable environmental protection requirements have also been considered, including the cost of compliance with the air pollution control requirements of the Clean Air Act.

b. *Annual operating and maintenance costs.* The expected increase in operating and maintenance costs, exclusive of fuel costs, that would result from the burning of coal has been calculated based on infomation supplied by the owner or otherwise acquired by FEA.

c. *Fuel costs.* Based on an analysis of annual fuel consumption and fuel cost information supplied by the owner and/or, in appropriate circumstances, upon FEA's fuel cost estimates, FEA has determined that the burning of coal in lieu of natural gas or petroleum products at Robinson 9 and 10 will result in a decrease in annual fuel costs.

d. *Net operating cost differential.* Based on the factors stated in paragraphs A.1.a–c., above, as well as the expected remaining useful life of the boilers after conversion, FEA has determined that the net annual operating cost differential (which represents the difference between operating the boilers with coal and alternate fuel(s) as their primary energy source), resulting from the conversion of Robinson 9 and 10, will represent an annual cost increase of $403,378.

2. *Reasonableness of costs of conversion.* The foregoing analysis of the costs of conversion provided the basis for deciding whether the conversion of Robinson 9 and 10 is reasonable.

As a result of conversion, Marathon will incur additional capital investment costs, including financing costs, and additional annual operating and maintenance costs, exclusive of fuel costs, but will experience an annual savings in its total fuel costs for the expected remaining useful service life of the boilers after conversion.

Increased costs of conversion will be mitigated by the decrease in fuel costs. The net result, however, will be an increase in the annual cost of operating the boilers.

The use of coal at Robinson 9 and 10 will result in a substantial annual savings of barrels of oil that otherwise would be used as a boiler fuel.

Although conversion to the burning of coal would be expected to increase the cost of operating at Robinson 9 and 10, FEA proposes to find that such increased cost per barrel of oil saved is not unreasonable. This determination is based on consideration of the substantial savings of petroleum products that will result from this conversion. The determination that the costs of converting are not unreasonable is further supported by consideration of such costs in relation to the expected remaining useful life of the boilers after conversion, the size and resources of Marathon as examined in the following analysis of financial capability, the nature of the expected operation of these boilers and potential future increases in the fuel cost differential in favor of coal.

3. *Financial capability of the owner.*—a. *Recovery of capital investment.* FEA proposes to find that compliance with a Prohibition Order by Robinson 9 and 10 would be economically feasible. FEA's analysis took into consideration the financial capability of the owner and is based upon the owner's financial position as reported in the Dun and and Bradstreet Reference Book (March 1977). Where necessary, FEA performed an independent analysis of the owner's financial capability, considering such factors as the owner's current financial statement and the additional capital investment required for the owner to comply with this NOI and all other NOI's which are currently under consideration, as well as additional capital investment costs related to all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2 (a) and (c) of ESECA to MFBI's owned by Marathon. FEA related these additional capital investment costs to the total capitalization of Marathon and the remaining useful life after conversion of Robinson 9 and 10.

FEA does not consider the effect of the added capital investment costs to represent an unreasonable burden given the financial capabilities of Marathon to assume such costs.

b. *Total annual costs associated with conversion.* The total estimated annual increase in costs (amortized increased capital investment costs and other costs, exclusive of fuel costs) associated with the burning of coal as opposed to oil attributable to compliance with this NOI and all other NOI's which are currently under consideration has been determined. FEA also took into consideration total annual costs resulting from compliance with all other Notices of Intention, to date, if any, to issue Prohibition or Construction Orders, and from all outstanding Prohibition or Construction Orders, if any, issued to date under authority of Section 2 (a) and (c) of ESECA to Marathon MFBI's.

Notwithstanding the potential offsetting value of fuel cost savings, attributable to compliance with this NOI and all other NOI's currently under consideration, Marathon's total annual costs after conversion will increase by $403,378.

B. *Consistency with the purposes of ESECA.* Because the issuance of a Prohibition Order to Robinson 9 and 10 will discourage the use of natural gas or petroleum products and encourage the increased use of coal, FEA proposes to conclude that this action would be consistent with the purpose of ESECA to provide a means to assist in meeting the essential needs of the United States for fuels.

On the basis of the environmental analysis which FEA is required to conduct prior to issuance of a Notice of Effectiveness of a Prohibition Order, as well as the necessity for these MFBI's to comply with the Clean Air Act and other applicable environmental protection requirements, FEA proposes to conclude that a Prohibition Order to Robinson 9 and 10 would be consistent with the purpose of ESECA to provide for a means to assist in meeting the essential needs of the United States for fuels in a manner which is consistent, to the fullest extent practicable, with existing national commitments to protect and improve the environment.

III. COAL AND COAL TRANSPORTATION FACILITIES WILL BE AVAILABLE TO THESE MFBI'S DURING THE PERIOD UNTIL DECEMBDR 31, 1984

A. *Coal availability.*—1. *National coal reserves.* United States coal reserves are more than sufficient to supply national needs for the foreseeable future. U.S. Department of the Interior, Bureau of Mines (BOM) data show a demonstrated coal reserve base of over 400 billion tons, over half of which is currently technically and economically recoverable (Demonstrated Coal Reserve Base of the United States, by Sulfur Category, on January 1, 1974, Bureau of Mines (May 1975) (hereafter "BOM Survey")). Within these recoverable reserves approximately 200 billion tons contain 1 percent or less sulfur by weight. To determine when certain quantities of these reserves are expected to be available, FEA has examined several studies referenced herein, which together provide the best current evidence as to coal availability for the period ending December 31, 1984.

2. *National coal production and demand.* The comparison, stated below, of estimated national coal production, national coal demand, and the total tonnage of uncommitted planned national coal production (derived from responses to a survey of coal producing companies) shows that there should be sufficient production of coal to meet the total national demand through 1980. Beyond 1980, plans for new production are not yet fully developed because few coal producers have firm expansion plans that extend that far into the future; however, the projected total planned national coal production for 1985 already meets 99 percent of the total U.S. demand expected in 1985. With time, more potential mine developments will become firm plans, thus increasing the planned production.

a. *National coal production.* It is conservatively estimated that it will be practicable to produce coal nationally in at least the following quantities:

Year:	*Production potential (million tons)*
1977	732.3
1978	791.6
1979	851.4
1980	911.7
1981	960.0
1982	994.3
1983	1,017.4
1984	1,028.7
1985	1,029.6

The figures shown above are derived from FEA's Coal Mine Expansion Study (May 1976). This study demonstrates that most coal producers did not have firm or accurate plans for new capacity additions beyond 1980. The 1985 projection, therefore, tends to underestimate actual production potential.

An FEA study, Coal Availability Report, April 1977, (hereafter "Availability Report"), indicates current plans for nationwide production of uncommitted coal as follows:

Year:	*Production (million tons)*
1978	124.3
1979	243.1
1980	293.3
1981	350.0
1982	369.9
1983	396.2
1984	475.5
1985	544.9

b. *National demand exclusive of ESECA prohibition order demand.* The estimated national demand, excluding any increased demand resulting from FEA action under the authority of Section 2(a) of ESECA, is as follows (FEA 1976 National Energy Outlook):

Year:	*Demand (million tons)*
1978	730
1979	764
1980	799
1981	842
1982	887
1983	935
1984	985
1985	1,040

c. *National ESECA prohibition order demand.* The estimated potential demand for coal resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA is no more than the following ("Availability Report"):

Year:	Demand (million tons)
1978	11.0
1979	22.4
1980	32.5
1981	35.8
1982	57.4
1983	59.8
1984	59.8

3. *Characteristic coal production and demand.* FEA's "Availability Report" identifies coal of specific quality characteristics available for use at these MFBI's. The survey is based on data from 31 mining companies that supplied useful information on 96 mining units. Responses from these companies identified planned production of coal which is not now committed to a specific buyer. For those companies which did not respond to the survey, FEA estimated their uncommitted planned production based on their 1974 production.

a. *Characteristic coal requirements for these MFBI's.* FEA's "Availability Report" has determined that boilers of the type used at Robinson 9 and 10 will be able to burn coal of the following characteristics and comply with all applicable air pollution control requirements.

Btu's/lb	[1] 10,000
Moisture (percent)	[2] 15
Ash (percent)	[2] 20
Ash softening temp. (°F)	[1] 2,000
Sufur (approximately) (percent)	[2] 3.7

b. *Characteristic coal demand from these MFBI's.* The potential demand for coal, of the type described above, which would result from this NOI is estimated to be as follows:

Year:	Demand (thousand tons)
1979 and thereafter	104

c. *National planned production, characteristic coal.* FEA's "Availability Report" has determined that coal of the type described in paragraph A.3.a., above, is uncommitted to a specific buyer and will be potentially available to these MFBI's in a nationwide market as follows:

Year:	Production (thousand tons)
1978	124,300
1979	243,100
1980	293,300
1981	350,000
1982	369,900
1983	396,200
1984	475,500

d. *National ESECA prohibition order demand for coal, regardless of characteristics.* The national planned production of characteristic coal, as stated in paragraph A.3.c., above, exceeds potential demand for coal regardless of characteristic expected from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. National ESECA Prohibition Order demand as previously stated in paragraph A.2.c., above is no more than the following ("Availability Report"):

Year:	Demand (thousand tons)
1978	11,032
1979	22,434
1980	32,483
1981	35,755
1982	57,362
1983	59,815
1984	59,815

e. *Regional planned production, characteristic coal.* Coal with the characteristics described in paragraph A.3.a., above, is uncommitted and will be potentially available to these MFBI's (in a probable regional supply/demand relationship related to the location of these MFBI's) from BOM Districts 7, 8, and 13 as follows ("Availability Report"):

Year:	Production (thousand tons)
1978	28,934
1979	52,077
1980	58,396
1981	67,882
1982	71,985
1983	77,668
1984	89,345

f. *Regional ESECA prohibition order demand for coal, regardless or characteristic.* The expected regional production of characteristic coal, as stated in paragraph A.3.e., above, exceeds the potential demand for coal regardless of characteristic from BOM Districts 7, 8, and 13 expected to result from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA. This potential regional demand is estimated in FEA's "Availability Report" to be no more than the following:

Year:	Demand
1978	3,268
1979	9,149
1980	16,321
1981	18,005
1982	23,682
1983	24,095
1984	24,095

g. *Regional ESECA prohibition order demand for coal by sulfur characteristic.* The potential regional demand for coal from BOM Districts 7, 8, and 13 with a 2.21–3.71 percent sulfur content (which includes the 3.7 percent maximum sulfur content described in paragraph A.3.a., above) resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders issued to date under authority of Section 2(a) of ESECA is estimated in FEA's "Availability Report" to be no more than the following:

Year:	Demand (thousand tons) percent sulfur 2.21–3.71
1978	77
1979	1,330
1980	1,530
1981	1,531
1982	1,531
1983	1,531
1984	1,531

The regional planned production of coal stated in paragraph A.3.e., above, with the characteristics described in paragraph A.3.a., above, far exceeds this potential ESECA regional demand for coal by sulfur characteristic.

4. *State or local laws.* FEA has found no state or local laws or policies limiting the extraction or utilization of coal that would adversely affect these production figures, and none have been brought to FEA's attention.

5. *Conclusion.* FEA's "Availability Report" has identified nationally and in BOM Districts 7, 8, and 13 uncommitted coal production that meets the requirements of Robinson 9 and 10 as described in paragraph A.3.a., above. FEA proposes to find that this uncommitted coal exists in amounts sufficient in any year to meet the estimated additional demand for coal, both nationally and from these Districts, resulting from this NOI, from all other Notices of Intention to issue Prohibition Orders to date and from all outstanding Prohibition Orders isued to date under authority of Section 2(a) of ESECA.

Coal for these MFBI's will probably be bought from producers according to regional supply/demand relationships related to the MFBI's location from BOM Districts 7, 8, and 13. FEA observes, however, that the MFBI's could purchase coal in other markets as such production becomes available. The Feasibility of Considering Expanded Use of Western Coal by Midwestern and Eastern Utilities in the Period 1978 and Beyond, School of Engineering, University of Pennsylvania, November 7, 1975.)

B. *Coal transportation.*—1. *Location of MFBI's and coal supply.* Based on an FEA study, Coal Transportation Availability Report, April 1977, (hereafter "Transportation Availability Report"), coal for Robinson 9 and 10 would probably come from BOM District 8 as the primary supply area and from BOM District 11 as the alternate supply area. While these supply regions are among the nearest available sources able to supply complying coal to the plant, complying coal could be transferred by rail from other identified sources within the United States as well. The analysis of transportation availability is based on the most likely route as well as two alternate routes. These routes were chosen to demonstrate transportation availability.

2. *Route of coal shipment.* The primary route for coal delivery for Robinson 9 and 10 is to originate coal in BOM District 8 near Hazard, Kentucky, on the Louisville and Nashville (L&N) Railroad. The L&N would move it via Louisville, Kentucky, to Bloomington, Indiana, where the Illinois Central Gulf (ICG) picks it up for delivery to Robinson 9 and 10. The total rail distance is about 420 miles.

The alternate route from the primary suply area originates coal near Stearns, Kentucky, on the Southern Railway which moves it via Louisville, Kentucky, to Mt. Carmel, Illinois, where Conrail picks it up to deliver to Robinson 9 and 10. The total rail distance is about 350 miles.

An alternate rout from the alternate supply area would originate coal in BOM District 11 in Sullivan County on Illinois Central Gulf which would deliver the coal to Robinson 9 and 10. The total rail distance is about 30 miles.

3. *Originating trunk carrier.* The L&N, the originating carrier of coal for Robinson 9 and 10, has over 34,000 hopper cars in service and has been increasing this number by about 2,000 cars per year. Using an average number of 20 deliveries per year per 75 ton car, the L&N may need as many as 125 additional cars to handle the increased demand from Robinson 9 and 10. This estimate assumes that the railroad would neither have excess originating capacity nor obtain cars from other carriers in the originating vicinity.

FEA's "Transportation Availability Report" concluded that for all potential Prohibition Order candidates studied, there would be no major constraints in transporting coal. This study examined existing rail transportation car capacity, water transportation capacity including unloading docks, where applicable, and took into account projections made by all carriers to meet the anticipated demand for all types of transportation facilities as-

suming all MFBI's studied were to receive orders under Section 2(a) of ESECA.

The L&N indicated that transportation facilities at mine sites within BOM District 8 served by the L&N are in good condition and that loading facilities could handle the required coal volumes.

FEA has not found nor has it been informed of any apparent constraints to carrying coal for any originating alternate or intermediate carriers should they be used.

4. *Destination carrier and MFBI facilities.* Freight service to Robinson 9 and 10 is provided by Illinois Central Gulf and Conrail, as illustrated above. This refinery used coal as a boiler fuel until about 1970 and no delivery problems are foreseen. These carriers report that unloading and handling facilities would need to be modernized. It is expected that these repairs can be accomplished prior to the effective date for coal burning.

There are no other obstacles to the delivery of coal to Robinson 9 and 10.

5. *Conclusion.* Coal transportation facilities will be available for the period a Prohibition Order is expected to be in effect since no major constraints to coal delivery over the primary route to Robinson 9 and 10 presently exist, and alternate routes are available.

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